Accession 21856

L42C

TELEPHONE APPEALS.

DRAWBAUGH CASE.

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APPENDIX NO. 1.

ABSTRACT OF THE TESTIMONY.

The record consists of the following:—

For complainants:

Depositions in chief and in reply, 2 vols. (*complts, i and ii*). These contain 1741 printed pages, and include one hundred and one depositions, given by ninety-seven witnesses, three of whom had previously testified in the case.

Depositions and papers in rejoinder and in reply to the surrejoinder, 1 vol. (*complts, iii*). These include fifty depositions of witnesses in rejoinder, thirty-eight of whom had not previously been examined; also eighteen depositions of witnesses, ten of whom had not previously been examined. These latter were "to close" and in reply to the defendants' surrejoinder. All these are bound in *complts, iii*, making pp. 149.

Exhibits in chief and in reply, 1 vol. pp. 1047 (*complts, iv, exhibits*).

Also sundry instruments and some photographs, a list of which is given at the end of vol. iii.

The complainants will also refer to the moving papers, in accordance with the notice printed, *complts, ii, p.* 1741.

For defendants:

Depositions in defence, 2 vols. (*defts, i and ii*). These include the depositions of one hundred and twenty-seven witnesses, and contain pp. 1340.

Defendants' exhibits, pp. with the defendants' surrejoinder.

Depositions and papers in surrebuttal, 1 vol. (*defts, iii, surbtl*). These include one hundred and ninety-nine depositions in surrebuttal, one hundred and eighty-nine of which were from witnesses who had not before testified in the cause. This volume contains pp. 1140.

Depositions and papers in surrejoinder and subsequently (*defts*

iv, surj.). This includes thirty-eight depositions in surrejoinder, thirty-one of which were from witnesses who had not before testified in the cause, and two depositions of two new witnesses called at the close, in all 266 pages. The defendants' exhibits are bound with this volume.

Also sundry instruments and some photographs, a list of which is given at the end of the defendants' volume in surrejoinder.

RECAPITULATION.

	Volumes.	Pages of Exhibits.	Pages of Deps.	Depositions.
For complainants,	4	1047	2493	169
For defendants,	4	160	2746	366
Total,	8	1207	5239	

The progress of the case has been as follows: The bill sworn to Oct. 9, 1880, and filed Oct. 20, 1880. The preliminary injunction was granted Nov. 22, 1880. The defendants' answers were filed Jan. 6, 1880. The replication was filed Feb. 7, 1881.

Complainants' *prima facie* proof was taken Feb. 16 and 17, 1881 (complts, i, pp. 19 to 104 inclusive). The principal part of this consists of documentary evidence, title, charters, etc.

The defendants' proofs were begun at Harrisburg, April 19, 1881, before Frederick M. Ott, Esq., notary public, appointed special examiner to take testimony in the cause. Their testimony was continued from time to time at Harrisburg, Philadelphia and New York, and was completed April 28, 1882. They called one hundred and twenty-eight witnesses. This testimony is contained in two volumes, making 1340 pages, paged consecutively, and is here cited as "defts, i," and "defts, ii." The defendants have also printed some exhibits, bound in vol. iv. In addition to this they have introduced as exhibits seventeen instruments, alleged to have been made by Drawbaugh at various times, and also some models recently made for this case, have provided an atlas containing photo-lithographs of drawings recently made from said instruments, and have filed some photographs.

The complainants next took their proofs in reply. The depositions of Alexander Graham Bell and of Thomas A. Watson had previously been taken in other cases, and it was agreed by written stipulation, dated June 1, 1881, printed in the complainants' proofs, p. 105, that these depositions, copies of which were annexed to the stipulation and filed, should stand as evidence in this cause with the same effect as if herein taken and sworn to, the witnesses, however, to be recalled for further examination and cross-examination if desired. In pursuance of this, their depositions, taken in the summer of 1879 in another suit, were put in evidence, together with the second deposition of Mr. Thomas A. Watson, given March 10, 1881. Both these gentlemen were again called to the stand, reswore to their former depositions, and were cross-examined in this case by Mr. Hill, counsel for the defendants herein. The deposition of Mr. Bell is printed in the complainants' proofs, pp. 105 to 200, inclusive, and his cross-examination, occupying a month, in complainants' proofs, vol. ii, pp. 1572–1703. The two depositions of Mr. Watson and his cross-examination by Mr. Hill are printed in complainants' proofs, pp. 200 to 333, inclusive. The depositions of two persons who had early intercourse with Mr. Bell were taken at Boston in the fall of 1882, and in them were incorporated the depositions which these two witnesses had given in a former suit in the summer of 1879. These are the depositions of Prof. Clarence J. Blake and Mr. Edward L. Wilson, printed in complainants' proofs, vol. i, pp. 335 to 350 inclusive. The complainants began their testimony in reply relating to Drawbaugh's pretensions, at Harrisburg, July 13, 1882, and continued it at Harrisburg, Baltimore, Philadelphia and Boston from time to time until May 10, 1883. They called ninety-seven witnesses in all. This testimony for the complainants, making 1741 printed pages, is contained in two volumes, cited as "complts, i," and "complts, ii." The complainants also introduced a considerable number of exhibits, making 1047 printed pages, bound in one volume, marked "Complts, iv, Exhibits."

The defendants then began testimony in rebuttal, called "surrebuttal." This was actually commenced at Harrisburg, Oct. 23, 1883, and continued from time to time until it was concluded, March 24,

1884. This makes 1140 printed pages, 199 witnesses, is bound in one volume and cited as "defts, surbtl," being defts, vol. iii.

The complainants then began testimony in rejoinder at Philadelphia, April 10, 1884, and completed it May 24, 1884, having examined 50 witnesses. This testimony, making 602 printed pages, is paged consecutively at the end of the complainants' proofs, making pp. 1742 to 2343 thereof, marked "Complts, iii, Rejoinder," and cited as "complts rej" or "complts, iii." The exhibits introduced in the course of this rejoinder are printed with the text.

The defendants then took some testimony in surrejoinder, namely, 38 witnesses, covering 250 pages, commencing at Harrisburg, June 4, 1884, and ending June 13, 1884. It makes defts, vol. iv.

The complainants then took closing proofs in rebuttal of the defendants' surrejoinder. These proofs, begun at Harrisburg, June 14, 1884, contain seventeen depositions and some papers. They are paged with the complainants' other proofs, covering pages 2345–2493, and are bound with the complainants' rejoinder, at the end of complainants' vol. iii, and are cited as "complts, iii."

The defendants then took two closing depositions, covering 16 pages, which are bound at the end of the defendants' surrejoinder (defts, iv).

The testimony for the respective parties will be discussed elsewhere. It is convenient here to give a brief general statement of its nature.

The case of the patentee, Alexander Graham Bell. It is proved by papers written in 1874 and 1875, clear, explicit and unmistakable in terms, and by disclosures made in each of those years to eminent scientific men (Dr. and Prof. Clarence J. Blake and Prof. Charles R. Cross), that Mr. Bell had reached the conception of exactly the method of and the apparatus for transmitting speech by electricity, afterwards shown and claimed in his patent, was endeavoring to devise improvements to increase the volume of sound, and that the practical transmission of speech was the end he had in view. In the fall of 1875 he drew his specification himself, filed it Feb. 14, 1876, and his patent issued March 7, 1876, as No. 174,465. The apparatus therein described, when used and operating in the exact manner therein set forth, will, both

theoretically and practically, transmit speech. The mode of operation described in the body of the specification and in the fifth claim is complete and adequate to that end; and, if any part of it be omitted, speech will not be transmitted. No addition to it is needed; and, so far as it is departed from, transmission becomes imperfect or impossible.

The apparatus was exhibited in operation to the judges at the Centennial Exhibition in June, 1876, and was officially pronounced by them, through reports drawn by Joseph Henry and Sir William Thomson, to be "the greatest marvel hitherto achieved by the electric telegraph." In a few weeks Mr. Bell became famous throughout the civilized world as the first and only inventor of the electric speaking telephone. The telephone was at once called for by the community, and before the patent was eighteen months old, several thousand of them, with improvements subsequently added and patented, were in successful commercial use. When Drawbaugh was first heard of as a claimant for this invention, Mr. Bell's patent was more than four years old, and more than 100,000 speaking telephones, operating according to his method and paying royalty to his patent, had been put in use by him and his associates. No others were in use anywhere.

It is thus clear, by proof which does not rest upon memory, but which is part of the history of the times, that:

Mr. Bell sought to invent a speaking telephone.

He did invent it and patent it.

He became famous as the inventor and producer of that which was new to science and to the arts.

The community did, in fact, receive from him, and from no one else, this new art.

The case of the claimant, Daniel Drawbaugh. He was first heard of by the world, as a claimant for this invention, in July, 1880, when his pretensions became the chief stock in trade of the defendant corporation, with a paper share-capital of $5,000,000. The allegation on his behalf is that, many years before Mr. Bell first turned his attention to the subject and as early as 1867–8, the claimant had actually constructed complete and practical working instruments. But, on the other hand, this is coupled with the admission that, up to the time this controversy began, in the summer of 1880, he had not

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The case of the claimant, Daniel Drawbaugh. He was first heard of by the world, as a claimant for this invention, in July, 1880, when his pretensions became the chief stock in trade of the defendant corporation, with a paper share-capital of $5,000,000. The allegation on his behalf is that, many years before Mr. Bell first turned his attention to the subject and as early as 1867–8, the claimant had actually constructed complete and practical working instruments. But, on the other hand, this is coupled with the admission that, up to the time this controversy began, in the summer of 1880, he had not

applied for a patent nor filed a caveat; that he had never put any instrument to practical use, but had merely tried, from time to time, from one room of his machine shop to the other, instruments temporarily set up and connected for each experiment, and then taken down and laid away; that he had never offered them for sale or for use; that no man had ever sought one of his instruments for use; and that the community, in fact, had not obtained from him any knowledge of the art, but had obtained all its knowledge from Mr. Bell and his successors.

The defendants' evidence to prove the claimant's story consisted of the recollections of witnesses, who stated that at Drawbaugh's shop they had seen instruments or heard speech through instruments which he called talking machines, and which he said were of his invention; and of depositions from other witnesses, who stated that they had heard Drawbaugh and others say that Drawbaugh had a talking machine. *No paper written before* 1878 *connected his name in any way whatever with any attempt to transmit speech.* The defendants also introduced seventeen instruments, which, they alleged, had been made by Drawbaugh at various times, both before and after the date of the Bell patents in suit, and certain other instruments recently made for the purposes of this suit, and alleged to be more or less improved reproductions of former instruments.

We have observed (p. 82, *infra*, and elsewhere) that the disputed allegations which the defendants must prove to make out a story legally sufficient or credible on its face do not consist with the facts of Drawbaugh's history, admitted in the answer and in his deposition. To those we add other facts, established by writings or by indisputable proof, together with every paper which refers to him as the inventor of anything. If the defendants' allegations do not square with all their positive facts, the Court will neither believe them nor act upon them. This is the judicially established test; and it is established because the conclusions which discreet men draw from those facts, by applying to them the ordinary rules which govern human conduct, afford a higher grade of proof than mere recollections. That test is peculiarly called for here. All that the defendants offer rests upon ancient recollections exerted in behalf of a friend and neighbor, by men who admit their intelligence and mental condition to be such that for ten years they knew of and

lived alongside of the only speaking telephone in the world, and were neither interested in it nor affected by it.

The complainants also introduced the depositions of a large number of neighbors whose relations to Drawbaugh and his work were such that if he had had operative speaking telephones they would have known of them, and these witnesses testified in substance that they had not heard of such things, nor of him as the inventor of them, and did not believe the defendants' story. They also introduced the positive testimony of a considerable number of witnesses, who testify that if Drawbaugh had had such an apparatus he would have found no difficulty in getting from his friends and neighbors the means to patent it and bring it into use. They also introduced proof to show specific errors and falsehoods in the defendants' testimony. They did this with such undoubted certainty and to such an extent as to destroy all confidence in the whole mass of testimony among which these falsities occur.

Among other things bearing directly on the issues and also on the credibility of the witnesses who allege that they heard speech, the complainants proved positively that the earlier instruments are incapable of transmitting what the witnesses think they heard, or anything like it. They will not transmit speech.

They added proof concerning Mr. Bell's inventions and patents in suit.

In the course of various endeavors by the defendants to fix dates of certain alleged visits to the shop of Drawbaugh, sundry collatera issues arose. Two of these acquired considerable apparent importance from the number of witnesses called to them. One related to the question whether certain bridges upon the Yellowbreeches Creek were destroyed in August, 1873, and the other related to the date of a certain hydraulic ram furnished by Drawbaugh and put upon the farm owned by Thomas Draper, and occupied by George W. Kissinger, at Marysville, about eight miles from Harrisburg. The defendants occupied a large portion of their surrebuttal and surrejoinder in evidence upon these questions. Upon the bridge question they called fifty witnesses; upon the ram question they called sixty-seven.

The bridge question at most went merely to the amount of credit due the defendants' witness, E. B. Hoffman (No. 67, p. 136,

infra), whose testimony was very weak at the best. The ram question affects the date of the visit of the defendants' witness, Thomas Draper (No. 124, p. 257, *infra*).

They also, in their surrebuttal, called witnesses who said that they had heard certain named persons, chiefly Daniel Drawbaugh and his brother, Henry F. Drawbaugh, but also some others, say in 1868, 1869 and 1870 and subsequently, that Daniel Drawbaugh had a talking machine, and that it was common talk in the community from about 1868, 1869, 1870 and afterwards, that he had one; and they added some cumulative depositions about talking machines.

The complainants in their rejoinder chiefly confined themselves to meeting the evidence introduced by the defendants upon the subject of the bridges and the ram; and also added a few witnesses about talking machines.

A few observations may be made upon the manner in which the defendants took their testimony.

Hearsay. — Their record consists very largely of hearsay evidence. Whenever it becomes material, if it ever does, to prove that a claimant was busying himself in the endeavor to invent a talking machine at a certain period, mention of it at the time by himself, his acquaintance and neighbors, is of course competent evidence to prove not that he actually had a talking machine, but that the subject had occurred to him. But upon the question whether he had a successful one or not, or what its construction was, or whether it was a string telephone or an electric telephone, the mere statements of the claimant and of others that he had one are mere hearsay and incompetent. Most of this testimony cannot be successfully objected to, because it is competent for the lower and less important proof; but the Court will see that it is of very little value in any case. It is however introduced to a great extent by the defendants, and made to present an appearance of strength to which their proofs are not entitled. On the other hand, where the defendants introduce a witness who swears that he heard mention made that there was a talking machine at Drawbaugh's shop, it is always competent for the cross-examining party to ask him precisely what it was that he heard, because if the rumor was that the claimant had one there, but had not been able to make it work successfully, the party introducing the rumor must take it as it is.

The defendants, in the course of their testimony, have introduced

witnesses who swear that they heard A B say at a certain time or a certain place that he had seen the talking machine at Drawbaugh's shop. So far as this stands merely as part of a common rumor, it might be competent for the purpose and under the limitations already stated, though of insignificant value; but, so far as it is an attempt to prove anything definite, it is, of course, incompetent and of no value. But that is not all. Although the technical rules of evidence do not always rigidly oblige a party to call the most satisfactory evidence instead of the least satisfactory, when both belong to the same class, yet a court in equity, passing upon a question of fact, always finds it a subject of observation, and sharp observation, that a party, having within his reach the strongest evidence of a certain class, whatever the class may be, refrains from furnishing it to the Court, and lays before the Court the weaker evidence of the same class, although it be technically admissible. (See the authorities on this point in the body of the brief.)

It turns out in this case that the defendants have introduced the depositions of persons who do not profess to have any knowledge of the alleged talking machines themselves, but who simply swear that they heard A B, at a certain time or place, say that Drawbaugh had a talking machine. In the larger part of these cases it is proved affirmatively that the person named was, at the time of the taking of the testimony, living, a neighbor of Drawbaugh's, or within easy reach, and might have been called by the defence, but was not. In some instances, notably in that of Henry F. Drawbaugh, the person referred to was a witness who had been called by the defence, and whose own testimony by no means came up to what the defendants called others to assert about him. Thus Henry F. Drawbaugh testified that he never saw a talking machine at his brother's shop before the summer of 1872. The defendants introduced witnesses in surrebuttal, who swore that in 1868 Henry F. Drawbaugh had said that he had seen and actually successfully talked through a talking machine at his brother's shop. The same course was taken about several other witnesses called by the defendants. We are justified, from these samples, in asserting that whenever the defence have resorted to this second-hand proof of alleged knowledge it was because the witnesses whom they might have called, and should have called if their story were true, could not

testify to it. We are right, therefore, in calling upon the Court to reject such proof, not merely because it is technically incompetent, but because in its nature it is unsatisfactory, and is, in fact, an admission that the better grade of evidence, if laid before the Court, would be unfavorable to the defence. The defendants have at least fifty witnesses who profess to no knowledge except from such mere hearsay.

No witness for the defence is able to describe what he saw. With the doubtful exception of one of Drawbaugh's family, not a witness pretends to have known how the alleged instruments operated, nor how any of them were made, so that if Drawbaugh and his box of instruments had been destroyed, all knowledge of what he had done (whenever it was) would have perished. It is admitted that the public never learned from him how to transmit speech. Such a condition of things does not constitute in law a disclosure to the public, either theoretical or practical. But more than that, no mass of witnesses whose observations were so cursory and whose intelligence was so low can offer proof sufficient to identify instruments or afford a basis for judicial action in such a case.

Leading questions. — The defendants have habitually put in their testimony by means of leading questions. The witness was generally asked specifically if he had not at a certain visit or at a certain time seen a talking machine, and when it came to a question of identification he was rarely asked to pick one out from all the instruments shown, or to describe it; a particular instrument or two or three instruments were generally thrust before him, and he was asked to state whether those were the ones that he saw at a time named. The reason for this is apparent from certain cases where a witness, having alleged a visit at a certain date, and being asked to pick out of all the exhibits those which he saw, selected instruments which, by the defendants' own confession, were not made until several years afterwards. It is rather a waste of time to object to such questions, because they will be put in spite of objections, and the Court must read them. It is not necessary for a proper consideration of the case that a formal objection should be taken, for the Court, though it admit the question and answer as technically competent, knows that when practised counsel put such

questions habitually, it is because habitually they know that the witnesses cannot be trusted, either from lack of intelligence or lack of memory, to give the desired answer under any other form of question. Such an examination is, therefore, of itself a confession of weakness, and we ask the Court to scrutinize the depositions in this view.

Cross-examination. The object of a cross-examination is sometimes to test the memory by inquiries on collateral matters, sometimes to ascertain whether the witness is as fairly intelligent as can be expected of a man of his class; but, so far as regards the matter inquired of in chief, the object of a cross-examination is to find what is really in the mind of the witness on the subject. It will be observed that the cross-examination carried on by the defendants' counsel, particularly that carried on by the counsel who cross-examined for the defence during the complainants' rejoinder, was in large part a mere attempt to confuse the witness, to coax or lead or drag him into some appearance of absurdity, on matters not important to the case. The Court knows that the moment cross-examination degenerates into such a contest between a trained counsel and a witness of the class to which the parties had to resort very largely in this case, that moment the cross-examination, while it might entertain a jury, ceases to be of any aid to the Court in weighing testimony.

One well-known rule is, that if a witness is to be interrogated on cross-examination as to alleged statements claimed to be inconsistent with his testimony, time, place and circumstance must be brought to his attention, and if the statement be in writing it must be put into his hands before he is called upon to answer the question.

"This course of proceeding is considered indispensable, *from a sense of justice to the witness*" (Greenleaf, § 462). "A witness cannot be asked on cross-examination *whether he has written such a thing*, stating its particular nature or purport, the proper course being to put the writing into his hands and ask him whether it is his writing. And if he is asked generally whether he has made *representations* of this particular nature stated to him, the counsel is required to specify whether the question refers to representations in writing or in words alone; and if the former is meant, the inquiry, for the reasons before mentioned, will be suppressed, unless the writing is produced" (Ib. § 463).

The contrary course was pursued by the defence. The staple of several of their longest cross-examinations was the attempt to get the witness to swear to something immaterial or outside of his direct examination, for the purpose of contradicting him by proof of alleged statement. This was pushed to such an outrageous extent that the complainants finally had to instruct the witness not to answer. (See dep. of G. W. Kissinger, complts, iii,).

The Court will disregard such cross-examinations, or, rather, will look upon them as proof that the defendants know they cannot make even an appearance of attack on the witness except by methods which the courts always condemn as unfair and dishonest.

The defendants have called several witnesses to testify to alleged conversations with the complainants' witnesses, said to have been held from five to fifteen years ago, and under circumstances not likely to impress the alleged listener. The worthlessness of such testimony has often been judicially declared.

The rule of the United States courts that the cross-examination must relate to the subject matter of the examination in chief is well known, and is a just one. An ordinary instance of its application is found in a witness, called to prove a deed, who can be cross-examined as to matters relating to the deed and to the occasion of the execution, and his connection with it, but not upon the general merits of the case at large. But where a witness is called to swear that he knew of the existence of a telephone at the claimant's shop, anything which tends to show that the Court ought not to believe that one was there is competent. The defendants cannot exclude from the cross-examination facts which have that tendency and are within the knowledge of the witness, simply by not asking for them themselves: it is the office of a cross-examination to bring them out. A very large number of the defendants' objections, if it was the eye of the Court they were intended for, are based on this misconception. Particularly in the examination of the claimant Drawbaugh and under the issues raised by the defendants' answer, it is true that no question about his history, action and surroundings during the period touched by the examination in chief, or even earlier, can be out of place.

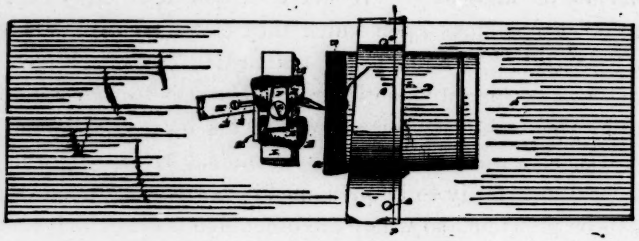
defendants have made many other objections on the record ch are founded on a false view and an entire misunderstanding of rules of evidence. The complainants' proofs about Drawbaugh, contained in their first two volumes and in their volume of exhibits, were not in any sense to be confined to what is technical rebuttal. They were to present the complainants' proofs about the Drawbaugh story, and anything which tended to induce a disbelief in the story as a whole or in any part of it was competent. The defendants dotted the record with objections as if the complainants were confined to contradicting such special details as the defendants had chosen to lay before the Court. On the contrary, one object of the complainants was to present to the Court all those positive facts of the claimant's history and surroundings which the defendants had carefully kept out of sight.

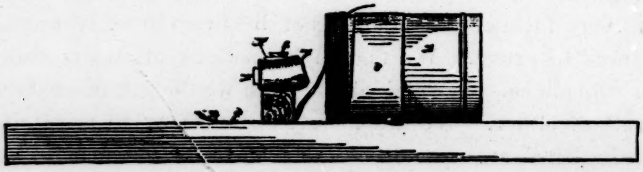
It may also be remarked that it is for the claimant to prove his case, and it has been more than once decided that the failure of a party so situated to lay before the Court the most persuasive kind of evidence accessible among all that legally competent affords ground for a decision against him. This rule has been specially held to apply to cases where the claimant or other witnesses having the best means of knowledge are not called or recalled, where there appear to be questions open which they could answer, if the story alleged be true. This rule, the authorities for which are given elsewhere, is of special value where the Court is to investigate what passed in the claimant's own shop, in his own village, and in the presence of his own family and own friends. Every one who is not called for him is fairly to be presumed in law to be against him, certainly to be presumed so where the other side have called enough of them to raise this presumption as matter of fact.

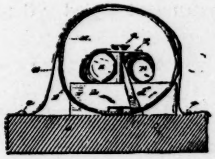
The discussion of the defendants' evidence is a peculiar task. We believe very little of it. We do not believe the story which it is introduced to prove. We find in it inconsistent stories neither of which we believe. In speaking of them we do not mean to admit the truth of either. We are merely endeavoring to ascertain what the defendants' own proofs amount to, how strong any part of them would be alone, and whether they are not so self-contradictory that the Court cannot rely on any of them.

For convenience we here reproduce reduced photo-electrotyp[staple] the drawings of those instruments produced by Drawbaugh w[mpt] the defendants allege were made before the date of the Bell paten[de] The instruments are in the testimony designated by letters. A full notice of these is in the body of the brief.

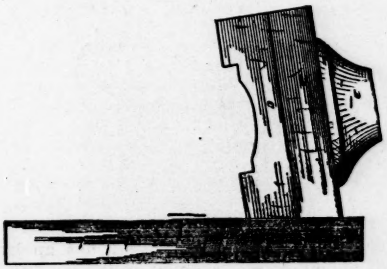
F. The body consists of a glass tumbler with the bottom broken off. Cap piece of black walnut. It is alleged that a diaphragm of bladder was stretched over the top of the tumbler under the cap piece. The cut is one fourth size of the instrument.



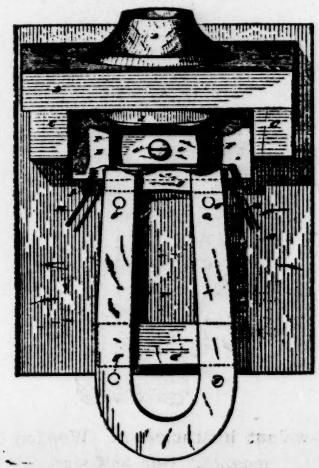




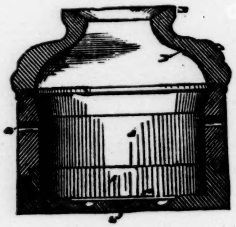
B. A tin can, B, partly smeared with green paint and lined with plaster of Paris, attached to a rough board by a strip of tin C, the ends of which are nailed to the board. It is alleged that a bladder was tied over one end, an armature attached to the middle of the bladder, and an electro-magnet fastened to the block in front of the armature. The cut is one fourth size.



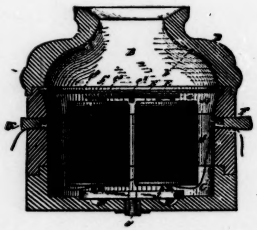
This is a view of C as it exists. One fourth size.



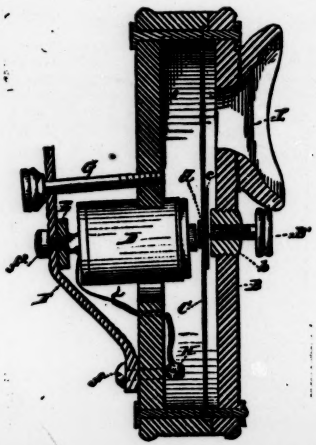
This is a view of the recent instrument styled "C reproduced." One fourth size.



I, as it existed when first introduced in the case. It consisted merely of a black-walnut shell.

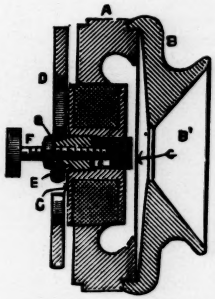


The recent instrument called "I reproduced." It has an iron diaphragm, and its electro-magnet is mounted on permanent steel magnets. One fourth size.



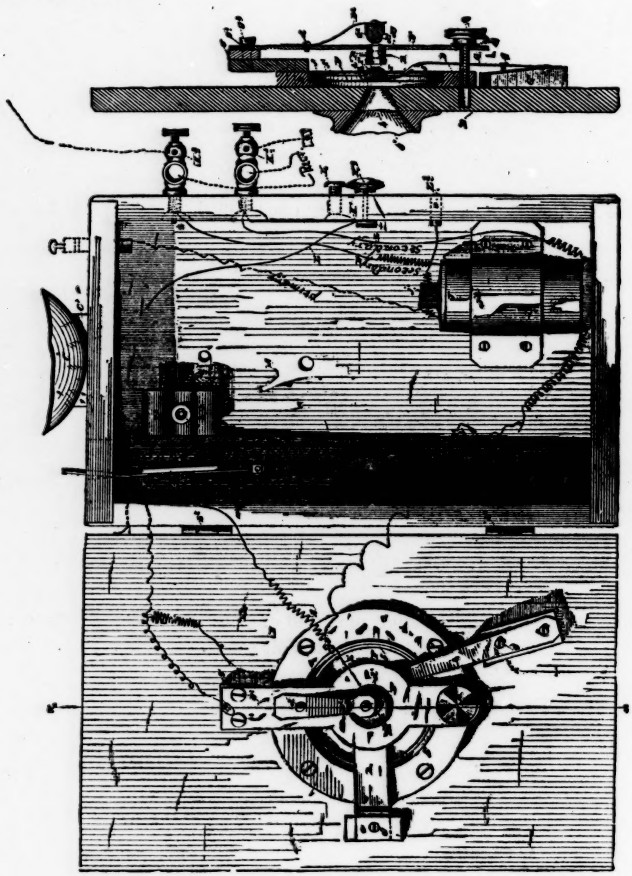
Section of the black-walnut instrument A. Wooden diaphragm; neutral magnet. One half size.

Rear view of "D," showing the curved permanent steel magnet One half size.



...tion of "D." Electro-magnet, mounted on permanent curved magnet; iron diaphragm; mouthpiece with thin air space. One half size.

One instrument, H, alleged to have been made after the date of the Bell patent, is much referred to. The following is one fourth the size of the original. Its extraordinary likeness to the well-known Blake transmitter is commented on in the body of the brief.



Defendants' Exhibit H.

The defendants, in sundry questions put to their expert and other witnesses, have intimated that they intend to allege the following dates for their instruments: —

B and F, 1867. C and I, 1870.

A, last half of 1874. D, E, spring of 1875.

H, summer of 1876.

ABSTRACT OF DEFENDANTS' PROOFS IN CHIEF.

No. 1. *Abraham B. Shank*, p. 21. — He was the first witness called, and having thus been adroitly placed beyond the reach of cross-examination as to his services in the case, entered upon his real functions as the defendants' employee, collecting testimony and summoning witnesses, large numbers of whom testify that they were first spoken to by Shank, *e. g.*, defendants' surrebuttal, pp. 270, 279, 287, 315–317, 341, 538.

He has been town constable for a number of years, but his deposition shows his ignorance and lack of intelligence upon all those subjects which would make him a witness of any value. It shows, moreover, the extreme looseness of his memory and his entire lack of any sense of responsibility in testifying.

His story is as follows: That in 1869 he was at Drawbaugh's shop collecting taxes. As is common with the defendants' witnesses, he attempts to fix his date by a merely arbitrary and illusive association. He bought a house and moved to it in February, 1870; produces the deed, and then asserts that the visit in question to Drawbaugh's shop was before he had bought that house; but he has been in the habit of going to the shop during many years afterwards. He says that he had occasion to go to Drawbaugh's shop because he was backward in his taxes. If he was there in 1869 repeatedly dunning him for that purpose these must have been taxes of 1867 or 1868. Now Drawbaugh, if his story be true, had no property on which he could be taxed until he received money from the faucet company for his patent and with it bought a double house and blacksmith's shop in Milltown, which he did not acquire until the spring of 1868 (Drawbaugh, ans. 480, defts, ii, 876). During the two years 1867 and 1868 he received several thousand dollars, and in 1869 $1,200 in cash (see body of brief); and it is perfectly certain that he was not at that time in such a state of poverty

that he could not readily pay his taxes. Either this story about backwardness with taxes and great poverty in 1868, 1869, is pure fiction, or else Drawbaugh was a man who, even when he had the money habitually delayed paying his debts and preferred spending his money for other purposes. Upon the subject of poverty see brief, *supra*. The witness then testifies that at some of those visits Drawbaugh talked to him through F and B, and that he heard and perfectly understood what was said, but had no conversation with Drawbaugh at the time about the invention (ans. 24, p. 23).

This testimony is untrue, first, because such results cannot be obtained with those two instruments, as shown by recent trials of alleged reproductions of them; and second, because Harmon Drawbaugh, Daniel's nephew, testifies positively that up to 1870 they did not even attempt to get speech through them. (See Harmon Drawbaugh, ans. 11, defts, i (p. 173, *infra*), 575.) Shank also testified that the two instruments were about twenty feet apart, separated by a single board partition with a door in it, and he did not know whether the door was open or closed (p. 23). The voice penetrates so easily through such a partition, even if the door were closed, and the few sounds which could ever be heard from such an apparatus are so faint that no man under such circumstance, unless he be an expert of long training, can say whether what he hears comes through the air or through the instrument. The witness then says that at another time (ans. 27, p. 24), "two, three or four years" after that, he saw instrument A. In answer to a series of leading questions he is persuaded to say that it was about the time that the Axle Company began manufacturing axles, which time, in point of fact, was the spring of 1875. The conversation then was from the upper story to the lower story. He says that he did not pay much attention to the instrument that was talked into, and does not pretend to identify it, and then followed the following, which is a pretty good sample of the intelligence and knowledge of the witness: —

"*Q.* 45. What did he then say about it?

"*A.* Well, he said a good bit about it then; had an argument on it; yes, sir; he said it was the greatest invention ever was known; if he, that is, if he had the means to go on with it, he said they could talk or rather be a time to come as to talk to the old country same as we can talk here. Then I asked the question how the

wires could be made across the ocean; he says they would have to be sunk to the bottom; and the argument was with me, as the ocean had no bottom at some places, they said; that is about all we had then on those things just at that time.

"*Q.* 46. Did he at that time state how the machine operated, that is to say, whether by electricity, magnetism or otherwise?

"*A.* He said it works by electricity."

Witness continues, that Drawbaugh showed him some U-shaped steel magnets, "such as you see in stores," and told him that he was going to experiment more and more with them. He says (ans. 81, p. 30) that C was one of the first instruments he saw; that is, he saw C in 1869, if he is to be believed. He thinks he saw I at some time, but he does not know when (ans. 59). As to A, he says (ans. 55) that A was an instrument into which Drawbaugh talked. Upon the next day *after adjournment* he says (ans. 98) that it was used to listen at. It is a well-admitted fact that A was not used as a transmitter. In ans. 53, he says he saw A about the time the Axle Company come into operation, which he states to be 1873 or 1874; in fact it was 1875. The instrument A is not even alleged to have existed in 1873.

In ans. 60–64 he says that when he first saw the tumbler F and heard it the bottom was on; there was water or liquid inside; and he saw this through a bladder tied over the top. It is certain that this is not correct, for other witnesses swear that it had no bottom on it at similar dates, and he could not have seen through a bladder into the interior of a tumbler which was lined with an opaque substance, as F is; and water would have been absorbed by the plaster-of-Paris lining, which would have dropped out if there had been any water in it. Moreover, if the bottom had been on the tumbler it would be impossible to arrange the alleged carbon box inside and fasten on the bladder. He says (ans. 72) that when he saw A, F was "done away with then." Undoubtedly F must have been "done away with" when A was used; but defendants cannot contend that it was "done away with" in 1873 or 1874, because their witnesses repeatedly refer to its alleged use as late and later than that.

Page 32: he testifies that Drawbaugh often said that "he hadn't the means to go on with these machineries, except some person or some parties would go in with him." Witness said he could not

give any time for that, but that Mr. Drawbaugh said it frequently, and in spite of very leading questions (see 103) he could not be induced to fix any particular time. On cross-examination, p. 35, he says that the first talk about alleged poverty was not when he saw F and B, but about the time when he first saw A (ans. 120, p. 34); that from the time when the Axle Company started up, in the spring of 1875, down to the summer of 1880, witness was at Drawbaugh's shop six or seven times a year, perhaps oftener, but that during all that time he did not see any talking machines, except that he "might have seen it in 1875. Since that he hasn't showed me any to my best recollection." (Ans. 121, p. 35.) This is the period of the alleged existence of D and E, the only two practical instruments — and he never saw *them*.

Page 34: instrument C was just in the same condition when he saw it as it is now, and he alleges that he saw it in 1869. It is now not in working order, but a mere wreck, and if it ever existed as far back as that, of course this shows that the witness's ability to identify an instrument is worthless. It appears again that he was frequently at Drawbaugh's shop, and as often as six or seven times a year from 1874 or 1875 until 1880 (ans. 120, p. 34); that he does not pretend to have talked through any instrument but twice; never saw any instruments at other times, except perhaps C, through which he did not talk, and does not pretend to have seen anything except B, F, C, I and A. Now speech cannot be practically transmitted with these. He made two affidavits, one in the summer of 1880, and one in the fall of 1876. Squire Bowman, to wit, Henry N. Bowman, afterwards called by the defendants in surrebuttal, and Mr. M. W. Jacobs, defendants' counsel, took the affidavits.

No. 2. *James Brooks*, p. 43. — The first knowledge of the alleged talking machine that he pretends to in his deposition is that he says he saw F and B at Drawbaugh's shop while working in the grist mill, between December, 1873, and April, 1874. On cross-examination (p. 46, ans. 30), it appears that he has known Drawbaugh from boyhood, and the complainants proved (complts, ii, 1044, ans. 69, 70) that this man worked for the Faucet Company in Drawbaugh's shop in 1868; this fact is not denied. We begin then with the

fact that this witness for the defence who worked for the Faucet Company in 1868, and had known Drawbaugh all his life, does not pretend to any knowledge of the alleged talking machine before the beginning of 1874, and then states that he and a boy in Drawbaugh's shop and in Drawbaugh's presence carried on a conversation, which was perfectly intelligible, through F and B. Of course this is fatal to any pretence that talking machines existed during the time of the Faucet Company, upon which topic see brief, *supra*. The witness says that the person speaking to him was a small boy. There have been a number of references to Drawbaugh's son Harry as a boy who at some time or other was in the habit of talking to persons through the talking machine at his father's shop. This lad, the claimant's oldest son, was born Oct. 18, 1867, and died Dec. 25, 1881 (complainants' rejoinder, iii, p. 2078).

It is absurd to suppose that he, at the time mentioned by this witness, 1874, and still more at the earlier periods related by others, could have taken such an instrument as F, adjusted it and readjusted it as the tests in New York showed was needed every few moments, and produced intelligible speech through it. Moreover, it is demonstrated as a fact in the case that intelligible conversation or sentences cannot be transmitted and consequently never were transmitted by F and B. Drawbaugh himself testifies also that at this time, December, 1873, to April, 1874, F and B were given up and retired to the attic (defts, ii, 1030–1).

It is certain also that if F and B were the exhibition instruments in the spring of 1874 (for the use with this man is merely alleged to be as a matter of exhibition and curiosity), all the pretences of the previous existence of C and I or any better instrument are false. Drawbaugh testifies that after making the better instruments he sometimes showed but did not use the superseded ones (defts, ii, 902, 1108, and see Shank, p. 19, *supra*). His testimony, if true, therefore, is clearly disproof of the existence of anything beyond F and B in the spring of 1874. The witness has only an arbitrary recollection to fix the date, and expressly testifies (p. 46, x-ans. 31) that he has frequently been at Drawbaugh's shop both before and since the time mentioned. With the usual attempt to give dramatic effect to the testimony, he testifies that he went there to get a little job of

work done, — mending his spectacles, — and Drawbaugh was so busy with the talking machine at that particular moment that he had some trouble to get him to lay it aside long enough to mend his spectacle frame.

The witness's memory, as to everything except the particular alleged visit and interview referred to in his examination in chief, is a perfect blank. Though he has frequently been at the shop, he never saw any talking machine instrument there at any other time. On re-examination he was subjected to the usual leading questions, or rather series of propositions, to which his assent was solicited and obtained.

The most important thing in his testimony is its disproof of the allegation that any instruments existed and were known at the time of the Faucet Company, and its disproof of the allegation that better instruments than F and B existed in the spring of 1874.

No. 3. *John J. Zacharias*, p. 49.—Age, 41; miller; he says that he talked through F and B at a visit alleged to be in July, 1869, but distinctly proved to have been not earlier than 1874.

Speech such as he describes *cannot* be transmitted with F and B; this is a fact positively proved.

Harmon K. Drawbaugh, the claimant's nephew, testifies that in 1870 they did not even attempt to get words through them but only "sounds that had more force or more vibration," instancing mu·ical sounds. See No. 87, H. K Drawbaugh, p. 173, *infra*.

The testimony of the witness Zacharias is a good illustration of the defendants' frequent attempts to build up an artificial structure as a means of fixing a date. He alleges that he was at Drawbaugh's shop "between 1870 and 1874," and has never been there since, except in the fall of 1876 (ans 3, p. 49); that at the former visit he saw F and B, listened at B, and understood what was said through it. Drawbaugh, he says, told him that it would eventually take the place of the telegraph; that he hadn't the means to take out a patent on it; that as soon as ever he got the means he was going to have it patented. But his description of the other things that he saw at the shop at that time, as brought out upon the cross-examination, unequivocally points to a

later period. Thus he says (ans. 50, p. 54) that Hauck & Co. were then manufacturing faucets. They did not begin until the summer of 1873 (D. A. Hauck and the deed; complts, i, 789). He says also that at that time Drawbaugh was working on electric clocks and a writing or spelling machine; that the writing machine would spell out the words like the telegraph, and had a dial like a clock. Drawbaugh states in substance (defts, ii, 988, 989), that he does not know exactly when he made that instrument; that he can think of no circumstance to fix this date nearer than the beginning of the Axle Company, which in fact was in the spring of 1875, but that it was after he had made the transmitting apparatus for signalling, which (p. 983) was made between 1871 and 1874, and which is pretty well fixed by other witnesses as made in 1873–4. The witness Zacharias also says that the clock he saw then was a rude structure, but had a face and workings; no such thing existed, according to Mr. Drawbaugh's own deposition, before 1873. The defendants made an effort, which the witness yielded to, to fix the date by what at first sight appears to be something more than an arbitrary association, and is really considerably stronger than most of the pretended associations by which they attempt to fix dates, but it fails. Witness says that upon this occasion he had gone to Drawbaugh's shop to buy a patent tram (ans. 5, p. 50), and that this was done to level off a new set of stones which had been put into the New Cumberland Mills, and that these were the only millstones that were put in there from the fall of 1868 to the spring of 1876. They follow him up by calling Stretch, a millwright, who testified that he put in the millstones between June 18 and July 3, 1869, and that Zacharias, according to his recollection, procured a tram from Drawbaugh for the purpose of facing up these new stones, and that the tram staff was bought between June 18 and July 3. All this seems quite neat and logical, until it turns out, when the treasurer and bookkeeper of the Faucet Company is called by the defendants, that instead of this tram being bought at the time stated and for the purpose of levelling off stones that were not put in until July, 1868, it was actually bought four months before (March 17, 1869), and paid for April 16, 1869 (see Wm. R. Gorgas, ans. 56, 57, 58, defts, i, 686).

The whole alleged connection of the tram, as a purchase made for

the purpose of levelling up the new millstones put in in June, 1869, falls to the ground, and of course no more reliance can be placed on his other statements. His date must rest on other parts of his deposition, which distinctly prove a period not earlier than 1874. But if the fact is at least five years away from the time he is produced for, he must be disregarded entirely.

His whole memory is very vague, and when on re-examination the defendants tried to lead him to say that the Haucks were not working there at the time, he readily enough falls into their views (see p. 61). His memory is, however, worthless upon a much more recent occurrence; he made an affidavit for the defendants only a few months before he testified, and he swore that the affidavit was written by the justice of the peace (p. 59), and that it was read over to him by the justice of the peace (p. 62). The leading questions put to him on re-examination by the defendants, however, show that the justice neither wrote nor read the affidavit; that it was both written and read to him by Mr. Jacobs, the defendants' counsel.

Zacharias is thus a witness to prove that in 1874 no better instruments than F and B can be pretended.

He testifies (p. 50): —

"*Q.* 9. From what time to what time did you work at the New Cumberland Mills?

"*A.* From the fall of '68 to the spring of '76.

P. 53, *X Q.* 39. "How long in all did you live at New Cumberland Mills?

"*A.* From the fall of 1868 to the spring of 1876."

Pages 53, 54, he testified that he went to Drawbaugh's shop and bought of him a cider mill. The price asked was $50, but he got it for something less. This was in the fall of 1876 (ans. 49).

New Cumberland Mills are on the Yellowbreeches, about three miles below Drawbaugh's shop, and at the place where it empties into the Susquehanna (see defts, p. 53, ans. 38, and geographical statement of S. M. Emminger, complts, ii. 929). Witness says that from 1876, for two years, he lived about two miles from Drawbaugh's. This was at the mill of Hake (often pronounced Heck), on the Yellowbreeches, and about two miles from Milltown (Emminger, complts, p. 930). Emminger also testified that he knows this man,

John Zacharias, a son of the senior of the firm of "Zacharias & Son," who formerly ran the mill at New Cumberland, and that this Zacharias was running Hake's mill in the fall of 1876, and had a cider mill there. His cider-mill operations in that fall are mentioned in newspaper records put in evidence (complts, ii, 935). These dates become important in connection with the deposition of Updegraff, No. 120, *infra*.

No. 4. *Joseph B. Stretch*, p. 62, is the millwright referred to in the preceding deposition.

No. 5. *Samuel C. Crawford*, p. 65. — His story is that in the fall of 1874, he went to Drawbaugh's shop with Wilson Bear, in regard to the patent axle business, which Bear and Kline were about getting up; that Drawbaugh showed them through his shop; that they saw some instruments and asked whether they were telegraph sounders. Witness says that one of them was a fire alarm, and that Drawbaugh said that another was a talking machine; that A was the instrument which he said was a talking machine; did not talk through it; says that this was in the fall of 1874, but before snow came. The witness says that he was often there that fall again, and has been there often since (ans. 23 and 24, p. 68), but he never saw any alleged talking machine at any other time. Wilson Bear, called by the defendants (No. 101, defts, i, 663), did not see anything of the kind on this visit. Smith, who pretends to have been in the shop at the same time, says that he never saw A, but saw Drawbaugh working on the pieces of it, and never saw them together (see D. W. Smith, p. 26, *infra*, and defts, p. 73, ans. 40; p. 75, ans. 55; p. 76, ans. 59).

No. 6. *Daniel Wesley Smith*, p. 69. — This witness testifies that he lived at Milltown from about the middle of November, 1874, until about the middle of January, 1875, — two months; and it would be inferred from his testimony that he never was there at any other time. It appears, however, that he afterwards became a travelling pedler, going around with a pack on his back, and as such was a constant visitor at Milltown in 1877, 1878 and so on (see Jacob Evans, complts, ii, 980; *ib.* 993, uncontradicted). Smith's material testimony is in the following: —

"*Q.* 9. Did you while there on any of those visits at that time see Mr. Drawbaugh working on a machine or instrument for talking at a distance?

"*A.* Yes, sir; he was working on the parts of an instrument he called a talking machine.

"*Q.* 10. Will you please examine the instrument marked 'A,' which I now hand you, and state whether you have any knowledge of having seen it or any of its parts; if so, when and where you first saw it or them?

"*A.* The parts he was working at were something like this, — its mouthpiece and those screws, — and I did not see it together in this shape; it was to be something of this shape, I recollect; I didn't charge my memory."

"*Q.* 14. You lived there about two months: was it during the early or later part of your residence there that you first saw Drawbaugh working at the talking machine?

"*A.* Well, I was down there frequently all the time I lived there; it was during the early part that I first saw the machine."

"*X Q.* 39. When you saw Mr. Drawbaugh at work on the parts of an instrument, as you have described, while you lived at Eberly's Mills, I suppose you remember what he told what you each part was for, and how he intended to put them together, don't you?

"*A.* No, sir; he didn't describe the particular uses of the several parts.

"*X Q.* 40. Did he show you how they were to be put together?

"*A.* No, sir; I only saw it in parts all the time he was working at it.

"*X Q.* 41. Did he tell you how it was to be used when put together?

"*A.* I remember of him saying that a piece like this (indicating mouthpiece of instrument A) was to be used as a mouthpiece something like this; I am not positive whether this was the piece.

"*X Q.* 42. What was he doing to the parts when you saw him working at them on this occasion?

"*A.* He was turning screws and thumbheads like this here (pointing to the milled thumbscrew heads on the two sides of the instrument marked 'A') on a lathe on the second floor."

"*Q.* 59, *r. x. q.* The first time you saw Mr. Bear and the gentleman there about their axle, was it before or after you saw Drawbaugh at work on the parts of A, as you have testified?

"*A.* It was while he was working at them, and it was the only time that I saw them there."

The defendants have intimated that the instrument existed before this, and that the work Smith saw consisted merely in moving the mouthpiece and adding the straining screw on one side. But that would have been only a few hours' work, and the description

by the witness as well as the length of time he says that he saw Drawbaugh engaged upon it, can only refer to an original getting up of a new machine. Moreover, in ans. 10 and cross-ans. 42, the witness in terms refers to the screws on both sides.

The witness's memory is again very bad about recent occurrences, and he asserted (p. 74) that Mr. Jacobs took his affidavit, and that Squire John F. Lee was not present, or at any rate he didn't see him; after the adjournment he came back with a "refreshed" recollection, and could remember very distinctly that there was another gentleman there, saying, of course, that it had come to his mind, and that he had not been prompted to it. (See Drawbaugh ans. 643, defts, ii, 903) As this witness in the fall of 1874, if his story be true, was frequently at Drawbaugh's shop during the two months, and all he knows about the alleged talking machine is that he once saw him at work *making* A, and that Drawbaugh told him that he hadn't means to take out a patent, but would have it patented if he got able, he does not help the story of a continued succession of practical machines.

Another witness, who was called the next day, can best be considered in connection with Smith. Smith's testimony, it will be seen, was, that in November, 1875, the parts of A were nearly finished. The next day the defendants called,

No. 9. *Urias R. Nichols*, p. 93. — This witness appears to be of more intelligence than almost any one called by the defendants. He is a machinist, farmer and brickmaker, and was at one time assistant signal station and lighthouse keeper near Baltimore. His story is that in January, 1875, he was in Harrisburg (although it afterwards appeared that he was in the habit of going there to market twice a week in summer and once or twice a month in winter); he says that he came to see, on this occasion, Mr. Stevens, a member of the legislature. The defendants do not call Mr. Stevens. He says that on his way home he bought some lime, which he alleges was delivered to him Jan. 18, 1875, and he says that his book shows the date. He does not produce the book. On his way home from Harrisburg to Newberry, where he lived, he says that he stopped at Drawbaugh's shop and there saw A and B. Drawbaugh told him that they were

to convey sound by electricity (p. 95). He says that Drawbaugh connected A to some wires, and he listened at A and heard conversation. "Drawbaugh opened a small box that was setting in a closet, and spoke as though he was speaking into the box." "I heard the voice of a boy saying, 'Is it you, father, speaking?'" "Drawbaugh said that the boy was two hundred feet off in length of wire." "He said he had been working at or using A about sixty days" and "had had B three or four years." "B was in the cupboard, but was not connected with any wires, and was not operated." He saw none of the exhibits except A and B (ans. 18, p. 94).

This visit, purporting to be in the last half of January, 1875, when he is informed that A had existed sixty days, agrees very nicely with the deposition of Smith, who saw him making it in November, 1874. But there comes a little difficulty: witness's description is that B was not connected with any wires; that Drawbaugh, being alongside of the witness, spoke into an instrument not produced or identified; that the witness listened at A, and heard the voice of a boy said to be two hundred feet away. This means that there were two lines, one by which Drawbaugh spoke to the boy, and another by which the boy spoke back to the witness; that both of them were practicable lines, through which conversation could be understood, and that B was not used on either. This requires four instruments besides B. Now it is demonstrated to a certainty by the New York tests that the instruments alleged to have existed at that time could not furnish two such lines. Witness says that he never saw the instruments again until a few months before he testified, and never was at Drawbaugh's shop afterwards.

Now comes the interesting part of his story. Referring to these visits, he testified as follows (p. 99): —

"*X Q.* 61. How did you happen to go to Drawbaugh's shop, instead of staying with Mr. Millard?

"*Ans.* To see the electric clock, of which I had read a description in the papers.

"*X Q.* 62. What papers had you read a description of it in?

"*Ans.* In one of the Harrisburg papers.

"*X Q.* 63. How long before?

"*Ans.* Some two or three months, I think.

"*X Q.* 64. Do you remember which paper?

"*Ans.* I do not.

"*X Q.* 65. Have you been in the habit of reading the Harrisburg papers, any of them?

"*Ans.* Most always, in coming to town to market, I buy a morning paper.

"*X Q.* 66. How often have you been in the habit of coming to Harrisburg to market?

"*Ans.* In the after part of the summer and fruit season, once and twice a week, and in the winter, often not more than once a month.

"*X Q.* 67. What was it that you saw in the paper about the clock?

"*Ans.* Account of a clock invented by Drawbaugh that was run by electricity and required no winding.

"*X Q.* 68. Did you see the clocks at Drawbaugh's on that occasion?

"*Ans.* I saw two clocks, but they were not running.

"*X Q.* 69. Were they in the same room as 'A' and 'B'?

"*Ans.* They were."

Here is an indication of date about which there can be no possible question: he went there to see Drawbaugh's electric clocks in consequence of having read about them in the Harrisburg newspapers, and when there he saw two of these clocks, though they were not running. The consternation which this gave to the defendants is pretty apparent in their attempts to get him to soften that statement on redirect examination (p. 101):—

"*Q.* 82. State whether you are or are not sure that the paper was published in Harrisburg in which you saw the description of the electric clock.

"*A.* I am not positive, but I think it was; I can't be positive whether it was a Harrisburg paper or not."

The fact is that there had never been any article in any paper whatever about Drawbaugh's electric clock at the date of this alleged visit. The first articles in any Harrisburg paper, or any other that this witness could have seen, were in February, 1878, in the *Baltimore American* and in the *Harrisburg Daily Telegraph* (see deposition of Miss S. R. Weaver, p. 373, and Miss E. R. Weaver, p. 357, who searched all these newspapers for that purpose). The articles which were found, and which exactly correspond to the description given by this witness, are in the *Harrisburg Telegraph* of Feb. 1 and 13, 1878 (complts' exhibits, iv, p. 386), *Baltimore*

American, Feb. 2, 1878 (*ib.* 390). There was a little article, which does not amount to enough to have given anybody the idea stated by this witness, and which it is not pretended he ever saw, published in the county paper, the Carlisle *Mirror*, but it was Nov. 16, 1875 (*ib.* 395). In the spring of 1878 there were other articles in several newspapers about it.

But this is not all that fixes his date. On cross-examination the witness was asked (p. 97) if he mentioned what he had seen at Drawbaugh's shop to anybody; he says he told Mr. Croll and Mr. Maish. His testimony is as follows (p. 97): —

"*X Q.* 42. After that visit to Drawbaugh's shop, did you tell anybody what you had seen and heard there?

"*Ans.* I think I told Mr. Croll and Mr. Mash (or Maish).

"*X Q.* 43. Who are they, and where do they live?

"*Ans.* Mr. Croll is a neighbor of mine, living near Newberry, and Mr. Mash is an attorney, living in York.

"*X Q.* 44. When did you tell them about it?

"*Ans.* Some time during that winter, when we were in conversation concerning Mr. Drawbaugh and his burr-dressing machine.

"*X Q.* 45. How did you come to talk with them about his burr-dressing machinery?

"*Ans.* Mr. Croll is a mill owner, and was with me in Mr. Mash's office. His errand in town, he said, was to purchase some bolting cloth. I asked him, I think, whether he used Drawbaugh's burr-dressing machine.

"*X Q.* 46. How did you come to know of Drawbaugh's burr-dressing machinery?

"*Ans.* I had seen it in use at Mr. Kunkle's mill at Lisburn."

We called Mr. Maish as a witness (complts, i, 741); he is a well-known lawyer of York, and has within the last ten years served two terms in Congress. He testified that he knew Nichols; that he remembered the conversation with him in which he told him that he had seen a telephone at Drawbaugh's shop: —

"He told me that Drawbaugh showed this telephone to him and told him that it was connected with his house, and asked him to speak into it, which he did, as he told me";

and that he thinks that Nichols told him about Drawbaugh's electric clock at the same time. Mr. Maish states that the telephone was then not a new matter to him, because before that he, in company with Mr. James G. Blaine and others, had talked through a Bell tele-

phone between the office of Mr. George C. Maynard, electrician, at Washington, and the house of Mr. Painter, a well-known newspaper correspondent; that he is perfectly certain that he did not know of the existence of Drawbaugh's telephone when he had this talk through the Bell instrument, and is perfectly certain that he did know of the Bell instrument when Nichols told him about Drawbaugh's telephone. Drawbaugh was a constituent of his, and if the facts had been the other way they would have made an impression on him, and he would have had considerable to say about it.

Mr. Maynard, called immediately after Mr. Maish, testified that on Monday, Oct. 15, 1877, he put up the line between his office and Mr. Painter's house, and that Mr. Maish came to his office and with Mr. Blaine and others talked over the line (complts, i, 746).

Mr. Croll was called by the complainants, and states (complts, i, 779) that he was the mill owner referred to; that he knew Nichols, and has known him all his life; that Nichols never told him anything about the Drawbaugh talking machine until, in April, 1881, he told him he was summoned as a witness to testify in the Drawbaugh suit, which surprised Croll, because he did not know how Nichols could have any knowledge on the subject. Nichols, with such recollection as he has, connected his conversation with Mr. Croll's presence at York to purchase some bolting cloth. Mr. Croll says that he first bought a bolting cloth in 1872, and that he next put one in in 1880, but bought it a year or so before that.

We next called Kunkel and the millers of Kunkel's mill (No. 35, J. S. Kunkel, No. 37, E. S. Kunkel, No. 36, J. Gochenauer, No. 71, W. Peck), and they proved (complts, i, 749, 779, and ii, 1194) that there never was such a thing as a Drawbaugh burr-dressing machine at Kunkel's mill. It is indeed certain that Drawbaugh never had what could strictly be called a burr-dressing machine; in all of his long deposition, though he was inquired about all of his inventions, he does not pretend to anything of that sort, nor do his advertisements mention it. He had a patent tram which was used in dressing millstones, and the witnesses say that no such apparatus was ever used at Kunkel's mill.

The only event by which Nichols pretended to fix the date of his visit is stated as follows (p. 94): —

"*Q.* 12. Did you make any purchase while here in Harrisburg on that trip, and if so, what was it?

"*Ans.* Not in Harrisburg. I purchased on my way home lime from Mr Hake.

"*Q.* 13. Are you able to fix the date of that purchase?

"*Ans.* Not definitely to the day.

"*Q.* 14. Are you able to fix the day when you received the lime so purchased?

"*Ans.* Yes, sir.

"*Q.* 15. What was the day, and how do you fix the time?

"*Ans.* It was the eighteenth day of January, 1875. I fix it by the date of an entry of its receipt on my book.

"*Q.* 16. When did you last refer to that book to refresh your memory as to the date?

"*Ans.* On Wednesday evening last.

"*Q.* 17. On your way home on that trip, did you or not stop at the shop of Daniel Drawbaugh at Eberly's Mills, Cumberland County?

"*Ans.* I did."

We called Henry Kintz (complts, ii, 1185, 1254); he was lime burner, and had entire charge of Hake's lime kiln, a couple of miles from Drawbaugh's shop, from the spring of 1870 to the spring of 1876. He kept full accounts for the use of his employer of all the lime which he sold, and he testifies positively that he never saw Nichols there, and never sold him any lime during that period; the books subsequently obtained and produced by him show the same.

To all this perfectly conclusive proof that Nichols's visit was not before 1876 and was in 1878, the defendants in the surrebuttal, which covered nearly a year of time, and in which they produced two hundred witnesses, did not offer a word of evidence. It may be observed also that Drawbaugh in his original deposition did not mention Nichols, and was not called in rebuttal.

It must be taken therefore as an established fact that Nichols's visit was in 1878. Now, what becomes of the defendants' case when we have the positive statement of one of their witnesses who went there in 1878, that A. the first instrument that can pretend to form even a part of a practical apparatus, was the best that could be shown him, and *was then only about sixty days old*, while he did not see D or E, or any other of the alleged subsequent instruments.

The Court must find, either that this witness, who swears he never

went to the shop but once (and there is no suggestion that he did), is absolutely fatal to the defendants' case, or else the Court must find that his whole testimony is a fabrication; that the defendants, having found him ready to believe and swear that he was there in the spring of 1875, *put into his mind and into his mouth the state of facts which accorded with the chronological schedule they had prepared.* If his testimony is true, it is fatal to them; they can only escape it upon the theory that it was a piece of manufactured evidence; the witness either deliberately lying or being unconsciously misled; and such a fact shows the worthlessness of their whole testimony, every part of which may have been manufactured in the same way.

The witness's direct examination is perfectly good and reads extremely well; he is a man of better intelligence than most of their witnesses; but we happen to have been able in cross-examination to get hold of some facts and records which are fatal to him.

It being thus certain that the witness's visit was in 1878 and not in 1875, what becomes of the character of Drawbaugh who sat by and permitted this testimony to go in? The Court must find either that his memory is absolutely worthless, or else they must find that, while shrinking a little from the responsibility of perjury himself, he is willing to sit by and take the advantage of what he must have known was a falsehood sworn to on his behalf and for the benefit of himself and his associates in this scheme.

No. 7. *Charles W. Diven*, p. 77, testifies that the records of the Arsenal at Harrisburg show that Michael P. Smyser was employed there as a laborer from June 1, 1870, until June 30, 1873.

No. 8. *Michael P. Smyser*, p. 78.—Age, fifty; residence Lisburn, Cumberland County; has known Drawbaugh twenty-five years; was employed at the State Arsenal, Harrisburg, 1870 to 1873; his wife lived at Lisburn, eight or ten miles from Harrisburg, and on the way home he passed by Eberly's Mills and occasionally stopped there; in 1871 or 1872 he thought he might be turned out of the Arsenal owing to political changes, and thought of travelling with a magic lantern, and stopped to see Drawbaugh about one. He says that there he saw F and B; F was in the cellar and B in the third story connected by two green cords. Witness says (p. 79):—

"*Q.* 16. Did Mr. Drawbaugh, on that occasion, exhibit to you the operation of the talking machine?

"*Ans.* He did.

"*Q.* 17. Please explain how he exhibited it. Tell us all about the exhibition.

"*Ans.* We went into the cellar or ground floor, Mr. Drawbaugh and I; a boy, whom I suppose to be Mr. Drawbaugh's boy; I did not ask him whether it was his boy or not, was there, and Mr. Drawbaugh told the boy that he should sing a piece and we would go up stairs, that is Mr. Drawbaugh and I, where this box (*indicating B*) was connected with the other, by the green coil, or wire, whatever you may term it, and he said I could hear it distinct; I took particular notice when we went up stairs, that the doors were shut after us; we went into the room where instrument B was — the tin box. The boy sang a piece, 'Don't you want to be a Christian while you're young?' I heard it just as distinct as if the boy would have been in the room where I was listening at the box. After the boy had sang the piece, Mr. Drawbaugh told him to whisper. He counted five in a whisper, in this way, 'one, two, three, four, five' (*whispering*)."

Drawbaugh said that it carried the sound by electricity, and that he could make one that would talk to California (p. 81). Since leaving the Arsenal he has constantly visited Drawbaugh's, and has seen there since June, 1873, A, D, E, and every other machine he had up eighteen months ago; thinks he has seen H, I, C, J, G, K, L, M, N, though he cannot identify G, K, L, M and N.

P. 81. "When I would visit Drawbaugh's shop after the time when I saw machines B and F, I would ask him how he was getting along with his talking machine. He would tell me that he was making improvements, — showing me the different improvements."

"From June, 1873, to July, 1880, I visited Drawbaugh's shop some years may be a dozen times or two dozen times; I could not positively tell how many."

Witness is asked by a very leading question whether Drawbaugh during all that time did not seem to be always thinking about his talking machines, and working upon them and making different forms of them, and he is induced to appear to assent to that proposition.

"*Q.* 34. What did he say about procuring a patent?

"*A.* He told me that he would procure a patent, but he was making improvements on it. He was going to procure a patent."

Afterwards the witness was asked whether Drawbaugh was not troubled by poverty, and upon that subject, he was induced to

assent to the statement which the defendants' counsel put into the question.

But on cross-examination he was not willing to swear that Drawbaugh was too poor to take out a patent; he did not know how much was needed (p. 85).

On cross-examination his memory turns out to be very vague and bad. He cannot undertake to fix the date of any instruments except F and B, but finally states that he saw J in 1880 or 1879 for the first time (ans. 52, p. 83); that he saw H and J together at one time (p. 84), and cannot recollect having seen H before he saw J. As this man was a frequent visitor, and claims to have been a pretty constant observer of the talking machines, if his story be true, it is very significant that his testimony very strongly shows that H did not exist till 1879 or 1880; if it had been there in 1876 and on, as pretended by some others, it is impossible to doubt that he would have known it and remembered it. He says (p. 84) that he and Drawbaugh were very intimate and often talked about this matter.

The witness on direct examination was called to prove a completed and perfectly good speaking telephone, but some of his answers on cross-examination are very significant, showing by the *actual facts* of what he heard and saw at Drawbaugh's shop, that the apparatus which he saw, whenever he did see it, was not far enough advanced to be patented. Thus, even on direct examination (p. 81, ans. 34), he says: "Drawbaugh told me that he would procure a patent, but he was working on improvements on it." Again (x-ans. 82), being asked what talk he had with Drawbaugh about taking out a patent on his improvement, he says, that when he saw B and F, "I said to him if this works right and you get it completed, you ought to get a patent right." This witness, again, is of those who allege that he heard through B and F in 1872 and 1873, and never had a knowledge of any use of C and I, and indeed *never took part in any use of any other instrument*, though a constant visitor for the next eight years (x-ans. 98, p. 89).

Now a man who was a frequent visitor at Drawbaugh's shop, and upon one occasion heard through F and B such sounds as these instruments were capable of producing, and was there repeatedly many times a year for eight years after that and never heard any

talk through them afterwards, is either a witness who believed from the result of his first trial that the operation was so bad that they were not worth listening at, or else a man whose mental condition is such that he is not worth any attention as a witness. A little examination of the deposition itself shows that the story told in it is untrue.

The speaker at the other instrument was a boy whom he understood to be Drawbaugh's boy (p. 79); the witness alleges that he was down stairs in the room with the instrument F, and that Drawbaugh "took it up and handed it to the boy" (ans. 95, p. 89). Then the witness and Drawbaugh went up stairs and listened. It is impossible that F at any time could have been handed from one person to another without such a disarrangement of the adjustment as to make it impossible to transmit even the semblance of articulation with it. The work of adjusting it must have been done by this boy alone, for Drawbaugh went up stairs. Now the eldest boy was born in October, 1867, and was between five and six years old therefore at the time alleged (complts iii, 2078). One who reads the anxious struggles of the experts for the defence in the New York tests, can realize something of the results that would take place if an inferior form of that instrument were in the hands of a boy six years old, and he were left to adjust and readjust and talk through it.

The witness cannot directly give any dates when he saw any of the instruments except this pretence about F and B, but we were able on cross-examination to fix very definitely the earliest date at which he saw A. In ans. 100, p. 90, he says he saw A up in the shop where Drawbaugh manufactured the electric clock; that the upper story at that time was partitioned off into three rooms, in one of these, being that in which the electric clock was, he thinks he saw A, and (x-ans. 105, p. 90) says that he first saw an electric clock there four or five years ago, which would be 1876 or 1877. So far as his evidence is worth anything, therefore, this constant and continual visitor at Drawbaugh's shop, who talked with him particularly about his talking machine, never saw A until after 1876 or 1877. The answers referred to are as follows (p. 90): —

"*X Q.* 100. Where was A when you saw it connected with another instrument by wires?

"*Ans.* There is a question I can't answer you; I don't know whether it was connected with any other instrument, — that I can't tell; it was up in the shop, where he manufactured his electric clock; it was in the third story. I think when I heard B, there were two rooms on the third story, and that afterwards the room I heard B in was partitioned off into two rooms, in one of which the electric clock was, and in that room I think I saw A on that occasion.

"*X Q.* 101. Didn't you ever hear or see A used at Drawbaugh's shop?

"*Ans.* No, sir; I did not see it used.

"*X Q.* 105. When, as near as you remember, did you first see an electric clock there?

"*Ans.* It might be four or five years ago; it might be longer, it mightn't be that long."

This witness had made an affidavit for the defence.

No. 10. *Jacob B. Fry*, p. 102. — Age, twenty; Shiremanstown; laborer. His testimony professed to relate to a period which he states to be more particularly the summer of 1875. He was then thirteen years old. He thinks that he then saw a talking machine at Drawbaugh's shop, — D and E (p. 104). He has heard talking through instruments *since* then; cannot say whether he heard these instruments at that time; does not remember ever seeing B or F or A; heard Drawbaugh and his son Harry talk through the instruments. Harry at that time was between seven and eight years old (complts, iii, 2078). This witness was a constant visitor at Drawbaugh's shop, and says that he saw talking machines there from time to time, from the spring of 1875 up to 1880; has nothing whatever except a mere effort of memory to fix any date of any instrument by. It is true that he states that he saw D and E when he was doing a little job of work at the shop in 1875, but that is a mere effort of memory, and there is no logical connection of D and E with that time any more than with any other. All that can be said of it is that it conforms to the dates of defendants' chronological schedule, just as the testimony so thoroughly destroyed, of Urias Nichols, was intended to. He is certainly mistaken, however, upon one thing connected with that date, which pretty completely upsets him. His story is that he worked a week or two at that time for Harmon Drawbaugh, helping Harmon at the patent axle. Of course that was not when Harmon was working by the day; it was only when

he was working by the job. Moore, the chief man of the Axle Company, producing their books, testified about Harmon Drawbaugh's work, and his testimony was and the accounts are, that Harmon Drawbaugh's work on axles was by the day in 1875, and that it was not until April, 1876, that job work is charged, and what was then charged would not be more than six or eight weeks' work. So that if this boy's story be true that he was working for Harmon Drawbaugh, it was in the spring of 1876, and not in the spring of 1875, as he testifies.

This witness seems almost to have lived at the machine shop in all these years; he says (p. 108) that during the years 1876 to 1879 he was at Drawbaugh's shop "sometimes as high as twice a day, sometimes once a week maybe," and the first time he saw H was after he saw several of Drawbaugh's magnetic clocks there, which he thinks was in 1878 or 1879.

No. 11. *Jonathan Balsley*, p. 112. — This witness has known Drawbaugh for many years and formerly lived at Eberly's Mills; afterwards and for many years has lived at Shiremanstown, where he now resides, three miles from Eberly's Mills. He says that he saw at Drawbaugh's shop at some time what he was told were talking machines, and he thinks it to have been in the fall of 1875, because his wife died at that time and he went visiting certain places, among them Eberly's Mills, to divert his mind; he does not state that he has not been at Drawbaugh's shop at other times. There is nothing therefore but a mere arbitrary connection, dependent simply on memory, between the known death of his wife and the unknown date of his alleged visit to Drawbaugh's shop.

He says that he there saw D and E; does not remember A. Never tried to talk through any. Did not understand at all any description or explanation given about it. Says that he saw F, and testifies (p. 116): —

"*X Q.* 36. What other kind of machinery did you see while at Drawbaugh's shop?

A. I don't think there was anything under consideration except this."

P. 117, he says he first saw an electric clock at Drawbaugh's shop about eighteen months before testifying. It is certain that the most prominent object at Drawbaugh's shop in October and November, 1875, was his electric clock then completed and running as to its works, though the case was not quite finished. A witness who went there and who now brings his memory into such a condition that he can distinctly remember and describe D and E and F and did not see the clock and has no recollection of it shows a state of supposed knowledge which is not the result of memory but of some artificia stimulus applied about the alleged talking machine; in other words, the witness professes to remember a particular thing those calling him want him to remember, and has no memory at all of other things which would be at least as striking, and the defendants allege were in fact a great deal more striking to the ordinary visitor.

No. 12. *Christian Eberly*, p. 110. — Age, 64, Shiremanstown. This man was for many years the owner of Eberly's Mills, and a large part of the village, selling it out about 1870 to George Leonard. He lived at Eberly's Mills from 1844 to April, 1867, when he moved to New Cumberland. From April, 1867, to Dec. 20, 1870, he lived at New Cumberland; from Dec. 22, 1870, to the present time he lived at Shiremanstown, both these places being within three miles of Drawbaugh's shop. He undertakes to state the instruments that he saw while he lived at New Cumberland, that is, before December, 1870, and he swears to B and F, which accords with the defendants' schedule, but unfortunately he swears with equal positiveness to A. It is not pretended that A existed within three or four years of that time. He is equally bad about another date. He swears that Mr. B. Frank Lee, his former partner, died in 1872. Lee was carrying on a lawsuit against Drawbaugh in the fall of 1876, so that it is clear that the witness is at least four years out the way in his conjecture as to the death of his own partner.

He had been interested with Drawbaugh in several invention — steam injector, stave cutter, balance-rhyne, mill-tram and nail feeder. He and his associates, Gov. Geary and B. F. Lee, Gov. Geary's brother-in-law, furnished the money and Drawbaugh did the work; they paid him for his time, and he was to share in the profits if any

came. Such a man, so circumstanced, would have been applied to, not by a casual remark, but repeatedly urged to join with the talking machine if Drawbaugh had had one, and there is no doubt that if he had a practicable instrument, this witness or some of his friends would have taken it up. He appears to have been a man of means. It appeared in Drawbaugh's deposition (defts, ii, 1015) that Eberly must have paid him something like $1000 for work and expenses on the nail machine, and Eberly was only one of two or three partners, yet the most this witness can be induced to say, and that by very leading questions, was not that Drawbaugh ever asked him to furnish any money for the talking machine, for when that question was put to him his answer is: —

(P. 121.) "Not altogether; he intimated that he would take me in, and then,

"*Q.* 25. Did you decline the proposition or intimation?

"*A.* I do not recollect as I said anything, or what I said."

(P. 121.) "*Q.* 26. What I want to get at is, whether you accepted the proposition or not?"

After objection he answered, "I did not and my reason for not accepting it, taking no part in it, was that the last invention, the nail feeder, wasn't altogether completed, and he was still experimenting on that."

It is clear that the effect produced on this witness's mind by what he knew of Drawbaugh's alleged invention (whatever be the date), was that it was something incomplete, and for that reason having no attraction for a man very much disposed to invest money with Drawbaugh and in his inventions. It appears that the partners of this witness, with Drawbaugh, in the nail machine, were Gov. Geary, and Mr. B. Frank Lee, brother-in-law of Gov. Geary and private secretary to him. (Fettrow, defts, i, 374.)

This witness states that there are about fifteen or twenty families living in Milltown; that they are most of them poor people who live there, which is not true, because Mr. Leonard lived there; he, however, sold out all the property, it afterwards appeared, to George Leonard who lived there until 1878, and although the defendants carefully described the people who lived in these fifteen houses as poor, it subsequently appeared that within a short distance of them there were a large number of rich farmers worth from $20,000 to

$100,000 apiece. (See deposition of George W. Mumper, complts, ii, 1101. H. S. Rupp, *ib*, 1136.) He repeated again on cross-examination, that he saw A soon after moving to New Cumberland, that would be about 1870, and the defendants do not allege that A existed until four years after that. Witness was at Drawbaugh's in 1877, 1878 and 1879, but says that he does not remember seeing any talking machines there then.

No. 13. *John M. Waggoner*, p. 128. — Carlisle; cousin to Mrs. Drawbaugh. Says that he was at Drawbaughs' in the fall of 1874; saw B, F and A. Witness Wesley Smith (p. 26, *supra*) says that A was not made at that time; only the parts existed and it had not been put together; Waggoner was at the shop afterwards, but never saw any talking machine again; he did not talk through it then. The effect upon him was such that he told Drawbaugh it looked like a boy's plaything, to which Drawbaugh replied (ans. 21, p. 129):—

"He said that he hadn't got it to perfection; that he was sure it would work and that he was going to get it patented; he further said that it would do away with a great deal of telegraphing, and that there was a great deal in it, whether dollars and cents I can't say. I laughed at the invention and said I was afraid there was nothing in it. He said he didn't make a practice of showing them, but showed them to me because I was an electrician and a relative of his, and that I should say nothing about it."

This is a little ludicrous in view of one of the allegations in the answer, that the claimant was in the habit of showing it to everybody and the assertions of various witnesses that they had heard hundreds of people talk of it years before that all over the country. The witness, having styled himself "electrician," was asked what he did with electricity, and replied that he "cured diseases with it."

No. 14. *Michael Konn*, p. 135. — Age, fifty-two; laborer; Fairview. Has known Drawbaugh twenty-five years. Moved to Eberly's Mills in 1874, and says that during that fall he saw at Drawbaugh's shop a man whom he was afterwards told was J. M. Waggoner; Drawbaugh was showing instrument A to Waggoner; they were talking about a shocking machine; lived at Eberly's Mills four years (1874–8) and frequently went to Drawbaugh's shop;

as far as he knew Drawbaugh's occupation during these four years was working on telephones and clocks; does not know what other things were made there, but a great many articles were made there.

No. 15. *Geo. Freese*, p. 139. — Age, sixty-two; Shiremanstown; tailor. Has known Drawbaugh from boyhood; made a coat for Drawbaugh the price of which was $2.50. Thinks it was about 1869 or 1870; when he went to Drawbaugh to get the money for the third time, Drawbaugh, instead of paying him, called his attention to machine B and said it was a talking machine, talked through it and the witness said he heard; witness says he thought the thing was hardly worth anything. Drawbaugh replied: —

"'George, my fortune lies in this, but I am most too poor,' says he, 'unless I have friends that will stick to me; it is better than the telegraph; it works by electricity,' I think he said; I didn't pay attention; it was the $2.50 I was after."

Thereupon Drawbaugh went into Yetter's tavern and borrowed the money of Yetter and gave it to him. Witness said he heard and understood what was said by listening at B; that his ear was not close to the machine — just on the outside of it. The witness had previously given an affidavit. This is one of the cases where the witness testified that he heard and understood with his ear not close to the machine B, which is impossible, and that he understood what was said through the instrument of which B was a part in 1869 when the explicit testimony of Harmon Drawbaugh (p. 173, *infra*) is that they did not even attempt to transmit words at that time; and the proof from the test of the improved "reproductions" so called is that they could not have done it if they had tried.

No. 16. *Henry Yetter*, p. 141. —From April, 1869, to March, 1870, kept tavern and butchered at Eberly's Mills; his book contains an entry of $2.50, lent Drawbaugh, Sept. 17, 1869, and he testifies that that he was to pay the preceding witness, George Freese. Drawbaugh owed him before he got through trading with him as much as $116 for meat, etc., and finally paid him in part with whiskey which he got from his brother Henry F. Drawbaugh. Witness states that once when he was at Drawbaugh's shop during that period Draw-

baugh said he was making a talking machine and showed him F, but he didn't believe that one could talk through such a thing as that. He was the tavern keeper and meat dealer, and Drawbaugh constantly traded with him; yet he does not pretend that he ever heard any one else refer to the existence of a talking machine: evidently he did not believe from all he knew that it did exist. Testimony that such a contrivance was matter of general talk in the village did not get into the case until the surrebuttal, two years later.

No. 17. *D. B. Condry*, p. 145.—Age, 31; resided at Eberly's Mills and is a miller by trade. Moved to Etter & Shanklin's mill a quarter of a mile from Eberly's Mills, Sept. 9, 1875, and has resided there ever since. Says that he was at Drawbaugh's shop about Christmas, 1875, with Winfield Gross, and saw some talking machines; professes to identify B, D, E, F and A. Was at his shop afterwards frequently between then and 1880, and several times saw talking machines which Drawbaugh said were improvements; says they look like those shown him, but he cannot pick them out. He says that upon one occasion, the date of which he does not profess to state, Drawbaugh talked through them, and he heard, but he cannot recollect what instrument was used; never heard them used at any other time; Drawbaugh was working on it all along until 1880. The cross-examination shows that he has no definite memory about anything.

No. 18. *Jeremiah Fry*, p. 150. — Moved to Eberly's Mills in the spring of 1875; is father of Jacob B. Fry (p. 37, *supra*). At a time which he professes to fix by a memorandum, not produced, as April 9, 1875, he says that he sold Drawbaugh some potatoes, and that he went to Drawbaugh's shop about them; he saw B, F, D, E and A (p. 151).

"*Q.* 14. Did he talk through any machines at that time?
"*Ans.* He sang."
"*Ans.* 16. He said it was a talking machine."

He thinks the instruments used were D and E, but he does not know whether Drawbaugh said that they worked by electricity. From that time until 1880, witness was at his shop a dozen times a

year. Saw C on the first occasion, but never attempted to use any instrument again until in the spring of 1880 he talked through H and I; first saw H and I in 1879; each time witness saw him Drawbaugh said he was "still improving." And the witness adds, that while living at Eberly's Mills (cross-ans. 67, p. 156):—

"I talked with several persons that it is a very good thing if he gets it accomplished."

It is pretty clear from that that the occasion when witness and others talked about it was when the claimant *had not got a talking machine accomplished:* that their opinion was that it would be a good thing if he ever did get it accomplished. Witness says that he kept store at Eberly's Mills from October, 1875, until the spring of 1878, and again from the spring of 1879 to 1880. These dates are material in another connection. It is also worth noticing that this man is the store keeper and he is not asked and it is not pretended that the alleged machine was habitually talked about in his store, though questions of that character were put to casual and occasional visitors at the store.

"*Q.* 78. Did your neighbors at Eberly's Mills *frequently* talk about Drawbaugh's talking machines or telephones?
"*Ans.* Yes: I heard them talk of it *sometimes.*"

But for this he gives no date.

Drawbaugh traded at his store perhaps to the amount of $200 in all; always said that he was short of money, but the witness does not complain that he ever failed to pay him anything, nor did he hesitate to trust him.

No. 19. *H. Bayler*, p 157. — He was produced by the defendants as an important witness, but turned out to be very damaging to them. A lumber yard and saw mill at New Cumberland, about three miles from Drawbaugh's shop, were carried on for a time by Christian Eberly and John F. Lee, under the name of "Lee and Eberly." Eberly then retired and the business was continued by Lee; in the spring of 1873 Lee took to himself a partner, the witness Henry Bayler, and the business went on in the name of Lee & Bayler, until about the spring of 1877. Drawbaugh was frequently employed by all these different firms to repair their steam engine and machinery,

and at various times they sold him lumber. They were evidently men of means, and men who were likely to have known about his talking machine if he had one, likely to have desired one to use and to have had means to assist him with. All three have been called for various purposes. Lee was asked nothing at all about telephones.

Bayler's story is as follows: in 1873 he went into this lumber business at New Cumberland with John F. Lee, and Drawbaugh then repaired the engine; Bayler first made his acquaintance at that time and lost sight of him when he gave up business. At a time which he alleges was in June, 1873, went to Drawbaugh's shop and Drawbaugh showed him some inventions.

P. 158, Ans. 5. "Among others was a very crude machine, and he showed me the workings of it; after showing and explaining it I remarked, 'Why Dan,' as I familiarly called him, 'that is virtually a talking telegraph,' and advised him to take out a patent; says he, 'If I had the means I would; if you will advance me the means to procure a patent I will give you one half interest.'"

He says that Drawbaugh then talked through the machine and witness thinks he heard and distinguished his voice. It is not entirely clear from the answers whether the witness understood what it was that was said. Says that he never went to Drawbaugh's shop after the summer of 1873, though Drawbaugh frequently came to the witness's mill to make repairs and generally asked the witness to furnish money to patent, and once in 1873 the witness almost made up his mind to do it. He says that upon the occasion of his visit Drawbaugh had invited him to come to his shop to see an invention, not saying what it was; when he got there he found it was a talking machine (p. 162). Has not seen it since until a month ago. May have seen C at the time, but is not sure. Did see F and B, and listened at B. "They were connected in some way, but I do not remember in what way as I paid not much attention to the instruments" (x-ans. 49, p. 163).

He was called upon to testify to Drawbaugh's alleged poverty, which he did as follows (p. 160): —

"*Q.* 20. Do you know what Mr. Drawbaugh's financial circumstances were during the time that you were engaged in the lumber business at New Cumberland?

"*Ans.* Only from hearsay, and my own knowledge is, hard to

get money from; didn't ever seem to have any; for his repairs, that he made for us, he would collect very close, and would want the money for the repairs, if he owed us or not.

"*Q.* 21. Did he state why he wanted the money?

"*Ans.* Sometimes for provisions for his family, at other times he would not state for what purpose; unless he was in our debt, there were no questions asked.

"*Q.* 22. Do you know what was the common report in the neighborhood where he lived, about the condition of his family for the necessaries of life?

"*Ans.* I have heard, at the time I was engaged at New Cumberland, that he was very poor, and often did not have the necessaries.

"*Q.* 23. State in full just what you heard about it at that time.

"*Ans.* That is about as full as I can state it, excepting that I did hear that they did not know in the evening where their breakfast was to come from next morning.

"*Q.* 24. State whether or not Mr. Drawbaugh, at one time, during your copartnership, or at sundry times, obtained some lumber from you, and, if so, when the account was settled and paid.

"*Ans.* Frequently he got lumber from us; account was settled through repairs, excepting the last bill about the end of my business transactions there, for which I hold a lien against him or somebody else, I don't know which any more; when I left I placed the settlement of everything, the collection, and gave the party a power of attorney to close up and settle the business, and that is about the last that remains open."

Every material part of this deposition that can be tested is absolutely false.

In describing the place where the instrument was tried he says (p. 158): —

"*Q.* 9. State where the machine was that he was talking into and where the one was that you were listening at during that conversation.

"*A.* The machine was on a table in his workroom or office on somewhat of a raised shelf, the wire passing out of that through another room and into the third one as it were."

Now it is settled by the deposition of Drawbaugh himself that the arrangement of the upper story of his shop with three rooms, so that the wire could pass out of one, through another and into the third, was never made until the Axle Company came there in the spring of 1875, nearly two years after the alleged date of the witness's only

visit. In the next place it is perfectly certain that neither he nor any one else heard conversation through F and B. (See New York tests.) It is also very inconsistent with the story told by Drawbaugh on the stand, that in the summer of 1873 he should be using F and B, when he had, if his allegations are true, much better instruments in C and I, and should be using them, when offering the invention to a stranger, according to the story of this witness, and therefore called upon to do his best. For a further absurdity about the exhibition of these alleged instruments at that time alleged, see deposition of another of the defendants' witnesses, Abraham Fisher, No. 111, *infra*.

We have fortunately also another means of testing the value of this witness in the manner of the alleged poverty. His statement here is, that Drawbaugh did work for his firm, repairing their engine, always collected up in cash the money that was due him for repairs as fast as he earned it, and wanted any lumber he bought of them to stand on credit. That story is a falsehood and was known to Drawbaugh to be a falsehood at the time he and his associates produced this witness and had him tell it. The facts are these: —

Drawbaugh did work upon the saw mill for Eberly & Lee and from time to time got lumber from them; he did the same thing for Lee and the same thing for Lee & Bayler. The understanding between the parties was that the account with one of the firms should be assumed by the next firm and carried along in that way. Now in June, 1873, — the date assigned by Bayler for the alleged visit, — the accounts, if reckoned as an account with Lee & Bayler alone, showed $22.99 due Drawbaugh, and if as an account with all the firms together, showed $56.73 due Drawbaugh; throughout that period and from before 1870 down to May, 1876, there was from $30 to $50 to Drawbaugh's credit the whole time. This is ascertained from the accounts which were produced and put in by the complainants in Drawbaugh's cross-examination (defts, ii, pp. 1020–1022). The account was finally closed by lumber which Drawbaugh bought on credit from this firm in May, 1876. Some quarrel seems to have arisen in consequence of that last transaction and the firm, or rather Mosser, attorney in fact for Lee & Bayler, who was settling up their affairs, brought suit against Drawbaugh in 1878, and in the course of these proceedings Drawbaugh filed an affidavit stating the

facts substantially as we have rehearsed them and prescribed in this suit; and this affidavit (printed defts, ii, 1019) was sworn to in March, 1880, was thirteen months before Bayler gave this deposition.

The exact figures between them made from the accounts put in during Drawbaugh's cross-examination, and admitted by him to be correct, are as follows: —

At the time Bayler became partner, April 1, 1873, the account stood

	Repairs.	Lumber.
Repairs done for Eberly & Lee and J. F. Lee (defts, ii, 1021)		$120 14
Lumber furnished to Drawbaugh by Eberly & Lee and J. F. Lee (defts, ii, 1022) $71.74 + $24.66,	$96 40	
Balance due to Drawbaugh April 1, 1873 .	23 74	
		$120 14

The account between Lee & Baylor alone, and Drawbaugh, stood June 1, 1873: —

Repairs done for Lee & Baylor by Drawbaugh (complts, exhibits iv, p. 82), bill at bottom of page added up to that date		$24 47
Lumber furnished to that date (complts, iv, exhibits, p. 79, the bill) . .	$1 48	
Balance due Drawbaugh from Lee and Baylor alone, June 1, 1873 . . .	22 99	
		$24 47

Total amount of repairs done by Drawbaugh for Lee & Baylor,

April, 1873, to May, 1876 (defts, ii, p. 1021, Drawbaugh's deposition; and the bills, complts, iv, exhibits, p. 83) . . .		$71 92
Lumber furnished by Lee & Bayler to Drawbaugh during same period (complts, iv, exhibits, p. 79)	$52 97	
Balance due Drawbaugh from Lee & Bayler, May, 1876	18 95	
		$71 92

Thus the firms owed Drawbaugh at the alleged date of Baylor's visit, June, 1873, —

The old firm owed	$23 74
Lee & Bayler owed	22 99
Total due Drawbaugh, June, 1873 . .	$56 73

May, 1876, they owed Drawbaugh, —

The old firm	$23 74
Lee & Bayler	18 95
Due Drawbaugh, May, 1876 . . .	$42 69

and about three years interest to be added.

Thus the allegation that Drawbaugh collected his money as fast as earned is an entire falsehood, and must be presumed to be known to Drawbaugh to be falsehood, since he had told the story correctly under oath in a suit in which he had prevailed upon the strength of that story only a little more than a year before Bayler testified. But the value of these facts goes further than this. Bayler is called as a witness to show that Drawbaugh was so poor that at night his family did not know where their breakfast would come from, and yet for seven or eight years this poor man did not even take the trouble to collect a balance varying from $20 to $50, due him from these entirely responsible firms.

Bayler says that everything they owed him he required to be paid at once in cash, whereas it turns out that the firm never paid him one cent in cash. He is represented by this man Bayler as applying for a little money to take out a patent on the talking machine, when at that very instant Bayler's firm owed him and was able and ready to pay him a balance for labor amounting to just about enough to pay the fees for a patent, and Drawbaugh let that money stand, and took it in lumber three years after that. This condition of things existed for four years before midsummer, 1876. There was the money ready; Drawbaugh had only to go and get it.

We submit to the Court not only that this whole testimony of Bayler is worthless, and not only that this fact, that Drawbaugh did not trouble himself to draw this money due him gives the lie to the

pretence of abject poverty put forward in this case, but that this action, calling this witness to swear to something which Drawbaugh knew was a falsehood, since he had sworn to the contrary only a few months before, shows the manner in which the case is prepared and the readiness with which Drawbaugh will suffer to be laid before the Court statements which he personally knows are untrue.

No. 20. *David B. Carl*, 165. — Age, thirty-nine; Dillsburg; butcher and farmer. Lived at Eberly's Mills from spring of 1869 to spring of 1873. While there frequently visited Drawbaugh's shop; says that he say B first some time in 1870; F was attached to it, but they were in different rooms; saw the instruments more than once, but never heard them talk. Apparently Drawbaugh was carrying on a considerable business: —

"I first come to see it when I was hauling some stuff back and forth from the town [Harrisburg] for him; I generally fetched things from the shop, — patterns, and things for him as I went back and forth from market; he was doing job work generally and working at such machines as this" (x-ans. 22, p. 167).

Inasmuch as four instruments are all that Drawbaugh claims to have made between 1867 and 1874, it is a good sample of the value of this testimony that this witness states the making of talking machines by Drawbaugh to be a substantial part of his occupation during four years of that time.

He (p. 168) describes the rooms where he saw the instruments and says that one of them had a great many things in it, and among others "a couple of clocks," "he called them electric clocks"; and adds (p. 169, ans. 41): —

"The one clock I seen there was in a case I am sure; the others I couldn't tell you."

"*X Q.* 42. I suppose you mean that you saw these clocks at the same time you first saw F and B, don't you?

"*Ans.* No; it was some little time after that I first saw these two clocks. It was in the same room though."

He says, ans. 45: "At any time during my visits to the shop I have seen four [clocks] at one time there, if I remember rightly."

"*Q.* 46. When was that?

"*Ans.* I couldn't give you the exact time for I was there too often at the place.

"*Q.* 47. In what year did you see the four clocks?

"*Ans.* As near as I can tell I think it was in 1872; I ain't right sure about that."

The fact is, that four clocks did not exist there until after the summer of 1877; he therefore did not see them in 1872 nor at any other time while he lived at Milltown, and he must have been attracted by them at a visit four years after he left. There is nothing on which to rest the belief that his memory is not equally at fault about the talking machines. There was an attempt to repair damages on redirect examination, p. 171. He had said (x-ans. 38, p. 168) that at the time when he first saw F and B there, he saw two clocks in the same room, one, at least, of which was in a case. Being asked (redirect 69, p. 171) to describe the one which was in the case, he says that it was "about as high as a man," though he is not sure whether it stood on the floor or was two feet off the floor.

"*Q.* 70. Did it look like an old piece of work?
"*Ans.* No, sir; it was a new piece of work, very handsomely made; Drawbaugh made it himself, he told me."
"*Q.* 71. Was it an electric clock or not?
"*A.* Yes, sir; he told me so."

Referring to the four clocks he is asked (p. 172): —

"*Q.* 76. Do you know whether they were not clock works that had been brought there for Mr. Drawbaugh to repair?
"*A.* He told me he made them.
"*Q.* 77. Were they running any of them?
"*A.* I am sure that there were two running when I was there.
"*Q.* 78. Did they run by weights?
"*A.* No, sir.
"*Q.* 79. By springs?
"*A* No, sir; they ran by a wire he called an electric wire; I do not know where he had that attached to; he had one end attached to the clock."

Thus he described the clocks distinctly as they in fact existed about 1877–8, attributing all that to 1872; and this is further settled by his next cross-answer: —

"*R. X Q.* 81. You have described these two rooms that you saw these two instruments in; suppose a person were talking in one, and another person listening in the other, without the aid of these machines, was there anything except a single board partition to prevent the sound passing from one room to the other?
"*A.* There would be a double board partition between them; that

is, two-inch board partitions, with an intervening room between the partitions."

It will be seen by reference to the diagram of the partitions at the period of the clock company that this describes the condition of things at that time, one of the instruments being in the middle room know as Drawbaugh's office; the other in the larger office partitioned off by the clock company, with an intervening room between them. This is very clearly, therefore, the case of a witness who attributes in all respects where he can be tested to a period about 1872 a condition of things which did not exist until after the summer of 1877 or the spring of 1878.

This witness made an affidavit for the defence in August, 1880.

Shall we take it that his visit was in 1877-8, and that F and B were then the show instruments, or shall we take him as a man who has a pliant memory and has been talked to, until, in the language of Judge Swayne, "his imagination is wrought upon by influences to which his ears are subjected, and beguiles his memory"?

No. 21. *Jacob E. Smith*, p.173.—Laborer. Once, in Drawbaugh's absence, at a date which he gives as March 1, 1871, he was admitted to the shop by Drawbaugh's daughter, and says that he saw B. A visitor present said that with it you could talk three miles. On cross-examination, p. 176, he says he has seen F a number of times since, and has been at Drawbaugh's shop every year, and that he never took particular notice of the machine (ans. 33, 34).

He made an affidavit in August, 1880.

No. 22. *Cyrus Orris*, p. 177.—Age, forty-nine; works in Etter & Shanklin's mill; father-in-law of Jacob Smith; was present at the visit referred to by Jacob Smith; cannot identify any instrument nor fix any date when he was there; has known Drawbaugh twenty-five years; has heard people say that Drawbaugh had talked through the machine, and Drawbaugh had told him that he might talk to Harrisburg with it. Thinks he has seen F, B, A, C, D, E, H, but is not sure, and can fix no date. The witness intimates rather than positively swears that it was Drawbaugh's habit to spend his evenings well into the night at that shop year after year, pretty much every time he took notice of it, working at the talking machine.

that he once saw some instrument out on a stump connected with some wires, but has no idea when it was. His testimony about this is a good illustration of the value of leading questions; he is first asked whether he could recognize the instrument which he saw on the stump, and he says, "I don't think I could"; then instrument H is shown him, and he is asked, "See whether or not you remember that as the instrument." There was a vigorous endeavor by leading questions to make him swear that H was the instrument that he saw, but he says he could not say whether it was or not.

P. 182. "*X. Q.* 37. What years was it when he was working nights on the talking machine; was it one year, or all the years from 1871 to 1880?

"*A.* It was pretty much all the years since I live there.

P. 179. "*Q.* 15. Were you about the shop frequently from that time (1870) down to the summer of 1880?

"*A.* I was there the first year pretty often, about twice a week; next I wasn't so often; been going in about four or five times in a month from that time down to last summer."

Here is a witness who for ten years has been there once a week, who never heard any instrument talked through, cannot really identify any, and does not pretend to say when he saw any except that he is induced to say that he thinks he first saw one at a time testified to by a previous witness, at the taking of whose deposition he was present. He made an affidavit in the summer of 1880, and is very careful on cross-examination about it to state, as probably he and other witnesses felt about their depositions (p. 183): —

"*A.* 56. I told him, *to the best of my knowledge*, I could not just think of it at that time."

"*A.* 57. Yes, *to the best that I knowed.*"

It is evident throughout all this testimony that a very large portion of the defendants' witnesses, and in fact nearly all of them, are unwilling to swear positively to anything, but salve over a low sense of moral responsibility by saying that they testify "to the best of their knowledge," or "so far as they know," without any positiveness, or any means of any. Of course this is not the fact literally of all their testimony, but it is of so much of it that it is difficult to doubt that that was the sentiment of nearly all of their witnesses.

No. 23. *John Scherich*, p. 184. — Age, sixty-nine; Mechanicsburg; insurance agent; has known Drawbaugh all his life; was at one time agent for the sale of his faucets. He says that about four years before he moved away from Camp Hill, which according to his story would be 1869, he saw B and F at Drawbaugh's shop; that Drawbaugh talked through them, and he heard what was said through them, and Drawbaugh said that it would take the place of the telegraph. It is proved to be impossible that he ever heard or understood what was said through these instruments. Afterwards, at a time which he states to be between April, 1873, and April, 1875, merely from the fact that he thinks he lived at a certain place at the time, he saw B and F and other instruments; he thinks that he then listened at A and heard what was said, and that this was in the fall of 1874; he undertakes to identify A, but it certainly did not exist at that time, for, after that, defendants' witness, Wesley Smith, saw Drawbaugh making it (p. 26, *supra*) if his story is true; Scherich says that the transmitter used on that occasion was a kind of a little box, and nothing can in any sense correspond to his description unless it be I, and that not very well; it is impossible to talk with I and A, unless a supplementary battery be used, A being a non-polarized receiver; in the New York tests no attempts were made to do so, and Mr. Benjamin does not pretend that it can be done. The witness thinks he has not been at Drawbaugh's shop snice 1875 or 1876, but his whole testimony rests upon memory in the first place, and his assertion that he heard and understood speech through B and F shows that his memory is unreliable; his assertion that he heard through A in 1874, with any transmitter then alleged to have existed, shows that his memory is worthless, or his disposition to exaggerate such that he can transform a worthless instrument into a practical speaking telephone.

No. 24. *Henry C. Springer*, p. 190.—Age, fifty-two; shoemaker. He is one of the most important witnesses in the case.

It is impossible that Drawbaugh could have accomplished what he alleges with the speaking telephone, or could have reached the point of such machines as D and E and the hard carbon microphones G, O, H, without innumerable experiments: such experiments could not have

been performed without an assistant to talk or listen. He must have employed an assistant for both purposes, for the intelligent prosecution of such experiments requires the experimenter sometimes to listen to ascertain the results for himself, and sometimes to attend to the transmitter, because no one else would have the skill to adjust it. If a hundredth part of Drawbaugh's story be true, he must have had somebody repeatedly and constantly experimenting with him. Now, no such course of experiments is sworn to by anybody, even substantially; his witnesses, with few exceptions, are ignorant laborers or farmers who, being casually present from time to time, say that they heard a little speech through the instruments, used for their entertainment, or merely to gratify their curiosity. The only witnesses who pretend to have aided Drawbaugh by any actual experimentation or anything that could serve as experimentation, are his brother, Henry F. Drawbaugh, at one time his nephew, Harmon Drawbaugh, and occasionally his brother John Drawbaugh, the witness E. R. Holsinger, and this witness Springer; among them there are none who pretend to have experimented so continually as Springer. There are none who pretend to have regularly experimented with him for any substantial length of time except Springer and possibly at times Holsinger.

There are assertions here and there in the case that his son Harry aided him in the experiments, but considering that Harry was only eight and a half years old when Mr. Bell's patent came out, it is impossible to believe that he could have ever done anything in the way of adjusting a difficult transmitter, or in the way of real experiment, or in the way of forming and expressing a judgment which would be of any assistance to his father upon the results arrived at. It is, however, significant in the first place that Drawbaugh does not call any of his family to testify; Harry Drawbaugh, the only son, and the one referred to, died while the evidence was being taken; but it was after the testimony for the defence was substantially completed and Drawbaugh's deposition was half finished (see memorandum in the record, Dec. 25, 1881; defts, ii, 887). The boy was undoubtedly young for a witness, being a little over fourteen years old at the time of his death, but if he was old enough to experiment upon telephones with his father and to adjust and manage such an instru-

ment as F in 1872 to 1876, he certainly was old enough in 1881 to tell what he did with them. Of course the whole story of his assistance as a practical and serious matter is absurd. Drawbaugh pretends that his daughter Laura assisted him in some of his earlier experiments, but he does not call her, while at one time he and his brother Harry intimated that her health or state of mind was such that she was incapable of testifying, putting it substantially that she was *non compos*. It turns out that she has been married during the progress of this case (deposition of Jos. Ditlow, defts, surbtl, 530).

This witness Springer appears to have been the chief experimenter Drawbaugh ever had, and it is from such a witness that we ought to have some chance at least of knowing the outside limits of the truth; he certainly will not understate it.

Now we shall find, as throughout this case, that the nearer we come to a person who has means of knowledge, the worse the case is for the claimant.

Springer's story is as follows: He moved to Eberly's Mills, April 1, 1876, and moved away about January 6 or 7, 1877.

"*Q.* 4. While so living at Eberly's Mills, did you, or not, frequently visit the shop of Daniel Drawbaugh?

"*A.* Yes, sir; about twice a day, noon and evening.

"*Q.* 5. During that time did you see there what he called a talking machine?

"*A.* Yes, sir; that is what caused me to go down there pretty much every time I went.

"*Q.* 6. Did you go down to assist him about talking on it or operating it?

"*A.* He boarded with his brother, just above me, and he stopped still, after dinner, and I said I will go along down, and we will talk through that machine; I told him it was a curiosity to me, I wanted to talk with him through it.

"*Q.* 54. When you would go down in the evening, about what time would you generally go, right after supper or later?

"*A.* Went down about dark, and stayed there until about bedtime — talked there together.

"*Q.* 55. How many times during that year did you stay there during the evening, to the best of your recollection?

"*A.* His family was in Mechanicsburg and mine in Siddonsburg, and I would go down there pretty much every evening, and we were together pretty much all the time, outside of regular working hours.

"*Q.* 7. During the time that you lived there, as you have stated,

did you see more than one talking machine? If so, how many, to the best of your recollection?

"*A.* I saw these six that lays here (indicating 'B,' 'F,' 'D,' 'E,' 'G,' and 'O'); these two are the first we talked through (indicating 'B' and 'F'").

"[*Examiner notes that instruments 'A,' 'C' and 'I' are also on the table.*]

"*Q.* 8. How soon after you talked through 'B' and 'F' did you talk through any of these other four, 'D,' 'E,' 'G' and 'O'?

"*A.* It was about two months, or near as I can tell you, that he had these two 'D' and 'E,' or two exactly like them; he told me then that he had improved the machine; that he could talk both ways then. Then I went along down; the first we had we could only use to talk in one direction.

"*Q.* 9. Referring to these two instruments 'B' and 'F,' which did he talk into, and which did you listen at?

"*A.* He talked into the glass tumbler 'F,' and I listened at the tin box 'B.'

"*Q.* 10. Where were the two machines 'F' and 'B' when you were talking and listening?

"*A.* 'F' was in the second floor, in a little office that he had made partitioned off; 'B' was on the back part of the machine shop on the same floor."

"*Q.* 16. When he talked to you through those machines 'B' and 'F,' did you understand what he said?

"*A.* Yes, sir; quite distinctly.

"*Q.* 17. Did you recognize his voice, so as to distinguish it from other persons' voices through the machine?

"*A.* Yes, sir.

"*Q.* 18. Do you remember how he came to show you these two machines, 'D' and 'E'?

"*A.* He told me he had improved the talking machine, and showed me these.

"*Q.* 19. How came he to tell you that at that time?

"*A.* He told me he had got the machine that we could talk both ways — I to him and him to me.

"*Q.* 20. Did you ask him first if he could talk both ways, and was this his reply, or was this his statement without any question?

"*A.* He came down from dinner and stopped in my shop, and told me if I would go along down now we could talk to each other.

"*Q.* 21. And when you went down you talked through those machines 'D' and 'E,' did you?

"*A.* Yes, sir.

"*Q.* 22. *Was that the first time you had seen the machines 'D' and 'E'?*

"*A.* *Yes, sir.*

"*Q.* 23. Do you remember any of the conversation that you had through those machines 'D' and 'E' at that time?

"*A.* He asked me how I liked living in 'bachelor's hall.' I told him not very well.

"*Q.* 24. After you had talked through the machines 'D' and 'E' did you again afterwards talk through 'B' and 'F'?

"*A.* No, sir."

It will be seen that he had already examined the instruments, and said in substance that he did not see "A," "C" and "I." Defendants then tried to get him to improve on this, and questioned him as follows: —

"*Q.* 30. Did you at any time, when there, see this machine 'C'?

"*A.* I saw this in the office there; a little office he had.

"*Q.* 31. When you first went there?

"*A.* It was three or four weeks after I went there.

"*Q.* 32. Do you remember seeing this box 'I' there at any time?

"*A.* No, sir; I don't recollect of seeing it.

"*Q.* 33. Do you recollect of seeing this machine 'A' there at any time?

"*A.* *No, sir; he must have got that after I left.* I don't mind of seeing it.

"*Q.* 34. Did you see him making any talking machines while you were there, or working on them?

"*A.* No, sir; I never got there only at dinner time, and in the evening when he quit work.

"*Q.* 35. You have referred to seven machines in all as seen by you at that time. Are these all the talking machines that you saw there, or were there others?

"*A.* *These are all, to my recollection.*"

Here is proof of the most perfect kind from the defendants' witness, who is alleged to have been there twice a day from April 1, 1876, a month after Mr. Bell's patent came out (but never before), through the rest of the year 1876, for the purpose of aiding Drawbaugh in talking with his machines. This evidence is not brought out on cross-examination, as appears more particularly from his sixth question, "Did you go down to assist him about talking on it or operating it, etc?" He is put forward for this. Thereupon his explicit and unequivocal testimony is, that for at least two months after the 1st of April, 1876, the only instruments they tried or used or experimented with, and for the first part of the time the only instruments he saw,

were the broken glass tumbler and the tin can instrument B. That statement, which the defendants are not at liberty to contradict, which they have never repudiated, makes an end of their case. But the testimony of this witness does not stop there. The story in his answers 8–22 is, that at a period which he says is about two months, as near as he can tell, after he began, that is, along in the summer of 1876, D and E *were first produced as improvements:* they had been experimenting for some months with F and B, and D and E were then produced for the first time as novelties. Now, without for a moment assenting to this statement that they even then existed, here is the story of *their* witness, in a better position to know than any other person they produced, proving explicitly *that D and E did not exist before the summer of* 1876. An endeavor was made to get Drawbaugh to change Springer's testimony a little, or break the force of it, but without effect, and the questions and answers which were obtained from Springer on his direct examination are conclusive upon the question of the dates of D and E. One would think that if Drawbaugh could have denied the story of his assistant experimenter he would have stated in terms that Springer was entirely mistaken, and that D and E existed a year before Springer came there. Instead of that, when brought face to face with the question, he declines to contradict Springer's statement as to D and E, and *he declines to contradict Springer's statement that for some months after April*, 1876, *F and B were the sole subjects of experiment.* Now a skilful mechanic like Drawbaugh never would experiment with such rude contrivances as F and B for two months if he had got respectable results out of them, or if he thought he knew how to make a practical instrument. Even if he had wanted to try a carbon transmitter like F, he would not once use B as a receiver, if C or I or A or D or E existed. If F and B were all he had got to when our patent was three or four months old, then of course there is an end of their case.

Drawbaugh's statements about Springer's testimony, as we read them, leave the story worse for the defendants than Springer does. Springer says that for some months after April, 1876, they used only F and B; and Drawbaugh does not deny them. Then Springer says that they next began to use instruments which would talk both

ways, and Drawbaugh does not deny this. Springer next says that D and E were the first instruments that would talk both ways; Drawbaugh says that they were not; that C and I were the first that would talk both ways — and this is the only correction he applies to Springer. Applying this to Springer's testimony, it means that he is mistaken as to the lettering of the instruments which were first used by himself and Drawbaugh to talk both ways, and should have said that the novelties produced for that purpose in the summer of 1876 were C and I, not D and E.

Drawbaugh testified (defts, ii, 903) :—

"*Q.* 644. Henry C. Springer testified, on page 191 of defendants' printed record, that about two months after April 1, 1876, you showed him the two little magneto instruments, D and E, and told him that you had improved the machine, and could talk both ways then; and that the first instruments that you showed him during the two months prior to that time would only talk one way. Were the two little magneto instruments, D and E, the first instruments that you made that would talk both ways, or not?

"*A.* No, sir; I had other instruments; instrument C was one and I was another, but C was not as well adapted as a receiver as it was as a transmitter; I suppose I wanted to have him understand that those small magneto instruments could be handled more easily from the mouth to the ear."

Springer's testimony (p. 193),

"*Q.* 33. Do you recollect of seeing this machine A there at any time?

"*A.* No, sir; he must have got that after I left; I don't mind of seeing it."

is perfectly conclusive that A did not exist at any time during the year 1876. Upon this compare W. S. Dellinger's testimony about D and A (p. 124, *infra*).

This was the condition of this witness's deposition at the close of the first day; he came back the second day, and an attempt was then made to alter it (p. 197) :—

"*Q.* 64. Do you remember their [D and E] appearance when you first saw them, and if so, did they look as if they had just been made, or as if they had been made some time?

"*A.* They looked about as old as they do now, as if they had been made a long while; I am satisfied they were not made new."

We conceive that such an attempt under such circumstances is a confession.

If we had produced Drawbaugh's assistant in 1876 and proved by him that for the first part of that year he experimented with nothing but F and B; that *afterwards* more improved instruments were produced as new; the Court believing that witness would have said that that is an end of their case. And this is the testimony given by *one of their witnesses on direct examination*, which they did not repudiate and which Mr. Drawbaugh, whatever he says in other parts of the case, does not venture to deny when brought face to face with it on direct examination and in an attempt to get him to break its force.

Some other things in the deposition of this witness are worth noting. He says, p. 194, that Drawbaugh said he would get it patented, but was too poor, that he could not afford it, and that his family, particularly his wife, "were opposed to him working on it because it would never do him any good." Witness is urged to testify to Drawbaugh's alleged poverty, and he says that Drawbaugh appeared to be unable to pay him for mending shoes, the highest bill for which at any one time was eighty cents. Now Mr. Drawbaugh received in that year about $1,600 from the sale of property and in final settlement of the Faucet Company's affairs, besides his ordinary earnings. This witness shows also that Drawbaugh was fully aware of the value and importance of the speaking telephone (p. 195): —

"*Q.* 48. Do you recollect whether he said anything about the value of the invention?

"*A.* He said it would be a fortune to him and make him independent.

"*Q.* 49. Do you recollect whether he compared it with telegraphing; if so, what he said?

"*A.* He said it would far exceed telegraphing."

His account of Drawbaugh's devotion to the speaking machine after April, 1876, is as strong as language can make it (p. 198): —

"*Q.* 58. So far as you could see and know during the time you were there, what was Mr. Drawbaugh principally giving his attention to?

"*A.* His whole mind appeared to be on this talking machine. He told me that many a night he didn't sleep, just studying how to improve it."

This witness was not asked in terms whether he ever saw the instrument H, but gives a list of all he did see which excludes it. He testified that he saw G and O in October, 1876. Not for a moment admitting that G and O existed during that year, the testimony of this witness is conclusive against the defendants that they did not exist before October, 1876. The witness's account of them is, of course, untrue. His testimony is that they talked through G and O, and heard and understood what was said. As G and O are both transmitters, he never could have done that.

No. 25. *Daniel Balsley*, p. 200. — Age, forty-nine; New Cumberland; wagon maker; has known Drawbaugh thirty-five years. He says that he went to Drawbaugh's shop about 1872, — he feels quite sure that it was before 1874; saw B and F; never talked through any instrument. This witness appears to have the belief (p. 202) that Drawbaugh invented the Giffard injector, and that it was stolen from him. That he went there at the time stated and has not been there since, rests merely upon his recollection, without even any probability to sustain it. No one is called to support him. He mentioned the injector in his direct examination as Drawbaugh's invention, and said on cross-examination (p. 204) that Drawbaugh had partly made it, and some person had got it patented before he got to Washington. He made an affidavit for the defendants.

No. 26. *Elias Z. Good*, p. 206. — Age, forty-nine; lives near New Cumberland; formerly miller, now fence builder; lived at Eberly's Mills from 1852 to April, 1872; then moved to New Cumberland, two or three miles from Drawbaugh's shop, and in March, 1876, moved across the creek from New Cumberland to the adjoining village. Says that while he lived at Eberly's Mills (which would be before April, 1872) he saw F and B at Drawbaugh's shop, but never talked through any instrument (ans. 11, 12, p. 207); since he moved away has been at Drawbaugh's shop seven or eight times, chiefly to dun Drawbaugh for $5, which, he says, was paid to him in instalments, part in 1874 and the balance in 1880. At some of these dunning visits he saw B and F (p. 208).

"*Q.* 22. When you were there on any of those dunning visits, after you moved away from Eberly's Mills, did you ever see the talking machines again?

"*A.* I seen this machine ('B,' 'F').

"*Q.* 23. Did you ever see any other besides this?

"*A.* I can't say as I did.

"*Q.* 24. Was anybody operating the talking machine at the time you saw them on your dunning visit?

"*A.* Dan was in the room operating; that is what George told me; I was in another room with George, talking to him; George told me that Dan was operating on the instrument, the talking machine; that is what George told me.

"*Q.* 25. How long was that after you moved away from Eberly's Mills?

"*A.* I think it was the second year after I left there; I was there on a fishing expedition along the Yellowbreeches.

"*Q.* 26. George was Dan's brother, was he not?

"*A.* No, sir; Dan was his uncle.

"*Q.* 27. Was George listening at the machine when he said Dan was operating it?

"*A.* I can't tell you that; he was close by it."

That is to say, the defendants' witness proves, if he proves anything, that in 1874 the instruments the claimant was at work upon were B and F; does this help the defendants' case, or does it lead the Court to believe their story that four years before this they had been superseded by better instruments?

No. 27. *Ira D. Kahney*, p. 210. — Several members of the Kahney family have testified, and some of them in an extremely peculiar manner; their testimony is all considered together, with the defendants' surrebuttal.

No. 28. *Jacob E. Shettel*, p. 215. — Age, forty-four; residence, Shepardstown; has known Drawbaugh thirty-five years. It did not appear from his deposition, but was afterwards proved (complts, ii, 982) that he is a nephew of John Drawbaugh. His story is, that he saw B and F upon an occasion which he fixes as "about nine years ago," that is, 1872, because he thinks that he visited his uncle, John B. Drawbaugh, at Eberly's Mills about two years after he was married, and that he was married eleven years ago. This is a mere matter of memory. He says that Drawbaugh showed them

to him and told him it was a talking machine. There was a bladder over the end of B, and a bar of iron on it; "the bladder was bursted," and the witness says Drawbaugh told him that it could not talk. Drawbaugh said (p. 216): —

"It would be better than telegraphing, and that it would be worth a great deal of money. I don't remember that he said anything more at that time."

Witness says that he saw a piece of tin over the mouth of the tumbler F, and that the bottom of the tumbler was not broken out. Inasmuch as half a dozen witnesses have sworn that the bottom of the tumbler was broken out long before this, and as all the other witnesses have sworn that the diaphragm was not tin, but bladder, no reliance can be placed upon the witness in this respect. He alleges that he thinks this interview was before Haucks had begun the faucet business, but he had nothing to do with the Haucks and no reason to connect the real fact with the alleged. This witness was one of the members of the clock company; he opened negotiations for getting up that concern in the spring of 1877, and the company commenced business April 1, 1878. During that year of negotiation he was frequently at Drawbaugh's shop, and he says that early in the spring of 1877 he saw a machine which he thinks is H; but in spite of very leading and instructive attempts he declines to say that it was a talking machine. His testimony about it is as follows (p. 218): —

"*Q.* 20. Did you hear any conversation through it at that time?

"*A.* Not any conversation; he rang the bell attached to it; that is all he did to it.

"*Q.* 21. Did he tell you what it was for?

"*A.* Yes, sir; he told me what it could be used for, for giving alarms and calling at rooms of hotels.

"*Q.* 22. Did he tell you what the machine H was — what name did he give it?

"*A.* I don't remember that he gave it any name.

"*Q.* 23. Did he speak about its being a talking machine, or not?

"[*Objected to by* Mr. STORROW, *as leading and as an attempt to obtain an answer from the witness on a subject on which his memory has been exhausted.*]

"*A.* I don't remember that he said anything about its being a talking machine.

"*Q.* 24. Did you understand at the time whether it was a talking machine or not?

"[*Same objection, and also that the question is not competent.*]

"I don't know that I did; there was very little explanation of that instrument, that he gave to me at that time."

It is very clear from this that what he saw was the electric alarm bell that Drawbaugh had got up and intended to use in hotels. This is only one instance among quite a number where Drawbaugh's alarm bell has been evidently mistaken for H, the witnesses identifying H only because they see a bell on top. He says that he saw D and E in 1875; he has nothing whatever to fix the date by; he says that he saw A before he saw D and E; he was in Drawbaugh's shop a number of times between 1872 and the spring of 1878; cannot say how often Drawbaugh spoke to him at different times about the instruments, but he does not know that he ever saw him working directly upon them (p. 219):—

"*Q.* 32. What would he say about them from time to time during that period?

"*A.* He was improving them, getting them that he could talk plainly through them, and be understood plainly.

"*Q.* 33. About when did he tell you this, at any particular time, or all along during the time?

"*A.* Along during the time when I was there."

He says that he saw C at the first time that he first saw B and F, and that between 1872 and 1878 he saw A, B, C, D, E, F and H, and none others; that he does not remember any conversation between himself and Drawbaugh as regards patenting (ans. 26, p. 219). The clock company closed its business in the spring of 1879 (ans. 37, p. 220).

This witness, a connection of Drawbaugh, is a man of means, disposed to embark in enterprises, and who did finally, with his two brothers-in-law, invest his money in Drawbaugh's unpatented clock invention, yet he never once talked through or witnessed any use of the alleged talking machine, and never was solicited to put any money into it, though frequently at Drawbaugh's shop.

He testified (p. 223):—

"*Q.* 70. Prior to your getting up the electric clock company, did Mr. Drawbaugh ever say anything to you about desiring to get some-

body to take hold with him to help him to bring out his inventions, or any of them?

"*A.* I don't know that he has more than in the clock business; but he has made the remark to me that, if he had the means to go ahead himself with them, he could make more out of them.

"*Q.* 71. Did you ever talk to him prior to the establishment of the clock company about going in with him on any other invention than the clock?

"*A.* No, sir; not to my recollection."

P. 232. "*X. Q.* 150. Did he, during that year, ask you to take an interest with him and furnish money to take out a patent on it?

"*A.* No, sir; he did not. If he should have I should not have taken it, for I did not think there was much in it."

He says that in 1878, while the clock company was going on, he and his associates discovered or thought they discovered that Drawbaugh diverted his attention from the clock to some other work, which he now thinks was the talking machine, and that at the close of the year they suspected that it was the talking machine he was working at. Then some leading questions were put to him with a view of inducing him to assent to the proposition that he thought there was a good deal of money in the clock and none in the talking machine, and therefore his attention was not seriously called to it, but that he believed when Mr. Drawbaugh told him that he could talk as far as Mechanicsburg that he could do it, though in all those years he never talked nor attempted to talk through it. The questions put to him on p. 222 are further intended to convey the idea that the clock attracted a great deal of attention in the community and the talking machine very little. The defendants afterwards changed their views as to what they wish the Court to believe in this respect, and devoted a great deal of time in their surrebutting testimony to an attempt to prove that the talking machine was spoken of a great deal all over the country, and that people thought there was a fortune in it if he could only succeed in making it work.

The witness was cross-examined at considerable length with a view to fixing the time when the clocks were made, and the number of clocks that were made; for a consideration of which see the brief, *supra*.

This witness, who knew Drawbaugh all these years, and was John B. Drawbaugh's nephew, was called also to endeavor to sustain the allegation about poverty. He testified (p. 220): —

"*Q.* 48. Do you know what his financial condition was during the year 1878; if so, what was it?

"*A.* Yes, sir; it was pretty poor; he told me that he didn't have any money to get what he really should have for his family.

"*Q.* 49. When did he tell you that?

"*A.* Along during the year 1878.

"*Q.* 50. State any other facts that you remember bearing on the subject of his poverty during that year?

"*A.* We came to Harrisburg at various times during that summer, and he didn't have the money to pay his toll, five cents, across the bridge, and I paid it for him different times; and, also, he didn't have money to buy tobacco for himself, and I bought that for him several times; and I several times gave him a dollar, when we were over here, to buy groceries for his family."

But that was mere opinion; when we come to get at the *facts* of the case upon his cross-examination, they are exactly the other way. Thus the bargain between Drawbaugh and the clock company was that they should advance the money needed for materials, etc., and that he would contribute his own time and work; payment for his work was to come out only of the proceeds, and he was to work for nothing unless there were profits. His condition, therefore, was such that he was quite ready to embark in this enterprise, and put in a year's work more or less, running the risk of ultimate success, and Shettel knew this. Now that is not the condition of a man "miserably poor, with a large and helpless family depending upon his daily labor for support." It is the condition of a man who has substantial resources either of actual existing means or of credit. That this was the case appeared further from the cross-examination of the witness (p. 233): —

"*X Q.* 153. You have testified about his extreme poverty in 1878. Don't you think you have rather overstated his poverty?

"*A.* No, sir; not if I dare believe his own words.

"*X Q.* 154. You have testified that he was a friend of yours, and was so very poor in 1878, and that you let him work for your company that year and paid him no wages? Don't you think you have rather overstated the friendship, if he really was as poor as you say?

"*A.* I don't know that I have; I think he is just as good a friend of mine to-day as he was in 1878 and before; and we, as all others in business, having a contract, as we thought, think it right to live to that contract; and he not alone in 1878 was poor, but before that was just as poor as in 1878.

X Q. 155. You made a bargain with him to work for your company, maybe for a year, and he was not to receive anything for wages unless profits came at the end? Do you think it was the act of an old friend to make such a bargain and expect him to live under it, if he was as poor as you say he was?

[*Objected to by Mr. Hill as improper, incompetent and immaterial, and assuming to state the terms of the contract differently from what has been proved.*]

"*A.* Yes, sir; when I make a bargain or contract I always expect to live up to it, and I think it is perfectly right that everybody else should.

"*X Q.* 156. If he was as poor as you say, how did you suppose he was going to live at all and support his family under such a contract?

"*A.* Just as he did before he made that contract, by working many days for nothing, and depending upon his creditors to give him as they had been giving him before; but if he had asked me for the loan of twenty-five or fifty dollars I should have done it, but he never asked me for the loan of any money, with the exception of several dollars that I gave him at times, here in Harrisburg, when we were over.

"*X Q.* 157. Do you mean that it was your expectation, knowing, as you say, how poor he was, that he should work for you, and live on his creditors, and that you would leave them to stand it, and not pay anything yourself, unless it came out of the profits of the business?

"*A.* I didn't expect him to live on anybody, and I never pay anything unless I am asked for it."

Here then, we have from his own relative and one time partner the actual facts, that he was quite able, and he and others knew he was able, to get along without daily pay upon his own resources, and that his friend was ready at any time on the mere asking to give him $50, but that during all those years he never asked him for money, and never proposed to this friend to go into the talking-machine business. One of the Grissingers — Jacob — made an affidavit which was used on the motion for preliminary injunction, the truth of which is substantially admitted by Drawbaugh in his deposition (defts, ii, 1080, cross-ans. 1529). Jacob died while the defendants were taking their testimony, and before the complainants had an opportunity to take his deposition. It is perhaps enough to say that the defendants did not seek to take his deposition. Drawbaugh attempted to cast a slur upon the affidavit, but the facts appear on

the records of this Court. It is true that the affidavit was not printed as given. There was a misprint in a part which used Grissinger's own language; the error was corrected in the copy given to the Court on the motion, but not in the copy sent to Grissinger. The other Grissinger — Theodore — testified for the complainants in a deposition which is almost conclusive. (See for the history and value of the clock company testimony, the body of the brief, *supra*, and *Theodore Grissinger*, complainants' witness.)

No. 29. *W. M. Lory*, p. 235. — Age, fifty-one; carriage maker; known Drawbaugh seventeen years. He says that in the fall of 1864 Drawbaugh told him that he was about making a machine to talk through a distance of about twenty miles, and showed him a draught of it on paper; witness says that he did not understand it at all; said that the thing was impossible, but professes to remember the draught so well that he reproduces it on the witness stand; he pretends to fix the time by saying that it was in the year when Mr. Eberly broke the wheel of his buggy; he says that he has never been to Mr. Drawbaugh's shop since that fall.

No. 30. *Samuel Nichols*, p. 238. — Age, fifty-one; witness describes himself as a "civil engineer." Since March, 1868, has resided at White Hill, which is about a mile from Drawbaugh's shop, and at the nearest railroad station. It appeared afterwards, from the testimony of his son (complts, i, 852), that the witness had been engineer to run a stationary engine for the last ten or twelve years, at $33 a month. He says that the second summer after he moved to White Hill, which would be in 1869, he went to Drawbaugh's shop: —

"*Q.* 5. Was anybody present; if so, how many and who, when you first saw the talking machine?

"*Ans.* Yes, sir; my son-in-law, Samuel Bruce, was along with me at the time, and Drawbaugh spoke into the machine."

"*Ans.* 8. My son-in-law listened in the first place; Mr. Drawbaugh spoke through it and my son-in-law said he heard it very distinctly."

He then describes the place where this alleged exhibition took place, as follows (p. 239). —

"*Q.* 10. When Drawbaugh spoke, and Mr. Bruce and you listened, where was Mr. Drawbaugh and where were you and Mr. Bruce?

"*Ans.* Mr. Drawbaugh was in the regular shop department; there was then an open space between that and then there was a little drawing room in which Mr. Bruce and I were.

"*Q.* 11. Do you mean that Mr. Drawbaugh was in one room, you and Mr. Bruce in another room, and that there was an open space between the two rooms?

"*Ans.* Yes, sir.

"*Q.* 16. Could you understand through the machine what he was saying?

"*Ans.* Yes, sir; all that he spoke."

He swears that he heard perfectly what was said; and that the instruments F and B were the two instruments used on this occasion, and, in answer to a directly leading question, says that before he and Mr. Bruce went to Drawbaugh's shop, he had heard talk in the neighborhood about Drawbaugh's talking-machine invention.

So far and on the face of his direct examination none of the defendants' witnesses appeared better able to tell a stronger or more apparently conclusive story than this. It turns out to be absolutely rotten. At the beginning of the cross-examination (x-ans. 26, 27, p. 240) he admitted that all that Mr. Drawbaugh spoke through the machine was a couple of words. Then he says (p. 241): —

"*X Q.* 31. How came he to show you the instruments?

"*Ans.* We walked in there on purpose to see his machinery, and he commenced showing us then."

If the instruments — whatever they were, and whenever the visit was — had been capable of doing what Drawbaugh says he did do, and what the answer claims for the instruments alleged before 1870, the exhibition of them to persons who came to see his inventions, and for whom he took the trouble to stop his work, connect them up, adjust and use them, would not have been limited to two words. As no more was heard, it must have been because it was impossible to hear more. Such results, under such circumstances, prove that he did not then possess instruments good enough to overthrow this patent.

"*X Q.* 46. Where did you see them, and how long was it after you first saw them?

"*Ans.* At Eberly's Mills, at the old clover mill there. I never saw but the one time when he operated on them; I was frequently there, but I never went for that purpose."

"*X Q.* 48. How frequently were you there?

"*A.* I would go back and forward occasionally every once in a while, probably once in a couple of weeks I was in there."

He then tries to limit his frequency to 1868–9, and says, that since that time, he was not there over eight or ten times he thinks. After he saw the instruments, he says he used to talk about it to his neighbors, and when asked who with, he names Mr. Free and Mr. Coble. He made an affidavit for the defendants.

Edward Nichols, the son of this witness, worked in the shop for the Haucks, making faucets for about two months in the spring of 1874; he was called by the complainants (complts, ii, 852). It appeared in the first place from his testimony that the person, Samuel Bruce, named by the witness, Samuel Nichols, as his "son-in-law," who accompanied him, did not become his son-in-law until many years after the period stated by Nichols; the exact date was fixed by the production of his marriage certificate, and the testimony of the clergyman who married them, J. M. Speese (complts, ii, 924), as June 10, 1876. It appeared further, upon the testimony of the same witness, that Bruce had been married and had four children by his first wife, Nichols's daughter being the second wife; that before his marriage to Nichols's daughter, he lived a mile and a half from Nichols; that his first wife did not die until 1875 (*ib.* 926); that his second marriage was objected to by Sam'l Nichols very strongly, and that he was calling on Nichols's daughter only two or three months before the marriage, and had not been in the habit of going, and indeed so far as known had never gone to Nichols's house before that time.

These facts are virtually admitted by the defendants; they *afterwards* called the widow of Bruce (Bruce being dead) for another purpose, and she did not pretend to deny any of them (defts, surbtl, 612); they also called Mrs. Nichols (defts, surbtl, 731), wife of Samuel Nichols; she did not deny them; and they did not recall Samuel Nichols. It is quite clear therefore that when he went with the "son-in-law Samuel Bruce" as a companion, he went after June, 1876. Again the description above quoted given of the rooms

in answers 10 and 11 states a condition of partitions and rooms which did exist in 1876 and 1877, but which never existed until after the Axle Company began their operations in the spring of 1875. See the description of the changes in this brief, *supra*.

It is clear, therefore, first, from the statement of Nichols, that his companion was "my son-in-law Samuel Bruce"; second, from his description of the rooms in which the alleged experiment took place, that he did not go there until at least the summer or fall of 1876. Now the importance of this testimony can hardly be overrated; it is one of those sample instances where a deposition apparently good on its face is absolutely destroyed when we have, as from time to time happens, the means of applying a strict test to it; moreover with this proof that the visit herein described took place in 1876, the deposition of this witness becomes fatal to the complainants' case, for it describes F and B as the exhibition instruments, and the transmission of a couple of words as all that which was accomplished at the time of this visit, in fact, not earlier than midsummer of 1876. For a further consideration of the Nichols testimony see the abstract of the deposition of Edward Nichols, complainants' witness, *infra*.

No. 31. *Jacob H. Reneker*, p. 244. — Age, fifty; three eighths of a mile from Eberly's Mills; has lived there since March, 1875: says that a couple of months after he moved there he went to Drawbaugh's shop to get a clock fixed; saw F and B; thinks he saw C; thinks he saw something that looked like A; listened at the one that looked like A and heard distinctly what Drawbaugh said. He stated at first that what he heard through it was a song "Old Folks at Home," but upon a directly leading question he was induced to say that Drawbaugh spoke several words through the machine besides this song, and that he understood them quite plain (ans. 21, p. 245). He is not certain whether Drawbaugh spoke of electricity in connection with the machine, but "most thinks he did" (ans. 26, p. 246). He was afterwards at the shop down to the summer of 1880 a number of times and frequently in 1877; at different times saw Drawbaugh, so he says, working at machines which he was told were talking machines. In 1877 he was there several times.

The striking thing about his deposition is that Drawbaugh showed

F and B, and A, and used A in talking, *but never showed him D and E.* The counsel who called him would have asked about D and E, if the witness had ever seen them, but they did not. That D and E, far superior to the others, were not shown is substantial proof that they did not exist. This is enhanced by the fact that only four days before Reneker was called, Springer had given such decisive testimony against D and E, and the defendants had great need of a witness to them.

He went in 1877 to get from Drawbaugh some money which he had loaned him in May, 1877 (p. 247).

A. 33. "He came to the field where I was working, told me he was very hard up and wanted me to loan him about $20 for two weeks, and I gave it to him."

This is only another instance touching Drawbaugh's alleged poverty, wherein it appears that he was sometimes short of ready cash, yet he always had credit enough to raise money when he needed it. The story of the claimant told in the answer is that during the dozen years before 1880 he was not able to raise $15 for a caveat; here he had no trouble in getting $20 from a neighbor simply by asking him for it. And then comes a pitiful story which is told as follows (p. 247): —

"*Q.* 37. At the time that you made that loan to him was there any other transaction between you and him?

"*Ans.* There was; he wanted to trade me a bureau and secretary combined, on provisions, such as meat, potatoes, butter, eggs and lard for his family, and we traded in that way.

"*Q.* 38. Did he or did he not at that time say anything about being in want of provisions for his family?

"*Ans.* He did say that he needed provisions very bad for his family."

The facts turn out to be that Drawbaugh moved from Eberly's Mills to Mechanicsburg in the spring of 1876 to a new house he bought there and lived there for a year; then in the spring of 1877 he moved back to Eberly's Mills with such a supply of furniture each time that it took about sixteen horses to haul it (see Orlando Kahney, complts, ii, 992, and *infra*). When he came back in the spring of 1877 he had more furniture than he wanted, and among other things had two secretaries, one which he had made himself,

and one he had bought; the superfluous one was taken down to his shop, left there, and sold to Reneker, and although he very likely took his pay in provisions, that is only a common way of country barter and was doubtless more of an accommodation for Reneker than it was for Drawbaugh. Not content with this little melodramatic incident introduced in Reneker's deposition, the defendants undertook to enlarge upon it and had Drawbaugh swear (defts, ii, 900, ans. 623, 624, 625) that he traded off his bureau and secretary at that time because he needed provisions for his family; and,

"*Int.* 625. Had you no means to get such provisions except by trading away your household furniture?

"*Ans.* No, sir, not at that time — I can't — I had no other means."

On cross-examination, however, he admitted (p. 1064): —

"*X Q.* 1473. When you moved back to Eberly's Mills did you take all your furniture into the house which you moved into, or did you store some of it elsewhere?

"*Ans.* I took some of it to the shop, — a pair of bedsteads and a secretary in bureau form which I sold to Mr. Reneker; I took vegetables — potatoes and other things of that kind — in payment for it."

One of the persons who helped him to move in the spring of 1877 was Orlando Kahney, who testified as to the number of horses which he remembered were used to haul (sixteen or seventeen); that the house was well furnished, carpet on the floor, parlor organ, base-burner stove, etc.; that at the time they were hauled Mr. Reneker helped to haul the furniture, and he heard Mr. Reneker and Mr. Drawbaugh negotiating about the sale of this secretary (complts, ii, 992): —

"*Q.* 34. Did Mr. Drawbaugh have two secretaries at that time among his furniture, or did he only have one?

"*A.* He had two, he said, and didn't need but one.

"*Q.* 35. The secretary that he sold to Reneker, — was it one that he had bought at a store, or one that he had made himself?

"*A.* I think he said he had made that one himself."

The defendants have taken a great deal of pains to contradict all they can of Kahney's testimony, but they have not ventured to attack this part in the slightest manner.

We submit that it was a piece of deliberate dishonesty on Draw-

baugh's part to work up so dramatically the pretence that poverty compelled him to sell his household furniture to buy food for his family, when the real fact was that he sold a piece of furniture, discarded because he had bought a better one to replace it. And we submit that a volume of testimony in which such incidents occur is not a volume upon which a court would be justified in relying to make out such a story as this claimant tells. The whole of the defendants' case is full of just such false color.

No. 32. *John Weber*, p. 256. — Age, fifty-one; farmer; has known Drawbaugh from boyhood; says that he went to Drawbaugh's shop at the end of 1874 to get some repairs to his reaper. He describes the visit as follows (p. 256): —

"*Q.* 5½. While you were there at that visit did Mr. Drawbaugh show you any particular inventions of his; if so, describe those that he exhibited to you?

"*Ans.* Yes, sir; he showed me a clock that he called electricity clock, that he said he made; he also said it would run without being wound up, and then I said, 'Daniel, you have always been a great genius, but never made much money by all your trouble'; he said, 'I have invented a great many machines, such as telegraph,' then showed me that he could telegragh by writing on a silver paper, tin paper and put that to the wire, and it would write the same at the other end; then he said, 'I have a talking machine that beats all the others of my inventions'; then he showed me some fixings for talking in; now they — here is machines (indicating F) this he showed me and he said, 'there you talk in, and at the other end there is one that you must hold to your ear to hear what was talked'; I said, 'Daniel, that is wonderful'; then he wanted me to go down stairs and he would talk to me through this machine (indicating F), but I had no time to spare."

He then says that he saw B at the same time and saw A at the same time, and saw C, and in answer to a directly leading question he is induced to say that of all he saw there the talking machines made the most forcible impression upon his mind. To get out of another difficulty the defendants had persuaded Shettle to swear that it was the clock which made an impression on the community, and that the talking machine, even as late as 1877–8, attracted very little attention (v. p. 66, *supra*). He, Weber, had already stated that he did not trouble himself to stop to hear speech through the alleged

talking machines, but after going away he studied and thought over what had been said to him concerning it and told his brother-in law, who, however, is not called to support him.

No. 33. *John H. Stephens*, p. 260. — Age, forty-nine; farmer; has known Drawbaugh all his life; lives a few miles from his shop. The testimony of this witness is intended to prove that at some time or other before 1875 he saw B and F, and that in or about 1875 he saw D and E. He says that some time between 1870 and 1875 he was at Drawbaugh's shop, and Drawbaugh showed him B and F and explained them, but he did not understand the explanation and laughed at it, and that Drawbaugh said that in connection with them he used electricity and wires and a battery. He further stated when he first saw B and F, they were in the same condition as now (x-ans. 29), that he never noticed anything different, never took particular notice about them although he "saw them often" laying on the benches around there (x-ans 30, 31). He says that in 1875 he saw D. He thinks he saw C at some time or other, but cannot tell when, except that he saw it "after 1875, and he is certain in 1876," but adds, "I seen so many, you see, I am not positive" (ans. 15, 16). His means of fixing the dates are perfectly worthless, for he says further on cross-examination, that he was a very constant visitor (p. 261): —

"*Q.* 19. I refer to the occasion upon which you first saw the talking machines B and F; did you, soon after that, speak to any one about them, at home or to strangers?

"*Ans.* I did; I told them at home, as soon as I got home; I went down there, sometimes it was ten o'clock after night when I got home; they were wondering where I stayed so long; I told them when Dan was through with my work, he got to showing me his patent rights, and told them what he was working at."

"*Q.* 21. What members of your family did you tell about Drawbaugh's talking machines, at that time?

"*Ans.* I told my wife, two daughters and hireling.

"*Q.* 22. Subsequently to 1875 did you visit the shop at Eberly's Mills, in which Daniel Drawbaugh was working?

"*Ans.* I did; sometimes twice a day, and sometimes two or three times a week.

"*Q.* 23. Every year?

"*Ans.* Every year; sometimes I missed for a couple of months that I did not get there; from 1870 on up to this time."

He lived three or four miles away and carried on a farm. Will the Court believe that he spent most of his time at the shop, or lend any faith to a witness who testifies so recklessly?

The defendants went to him five or six times about his testimony, and he made an affidavit for them in March, 1881. It is evident that there was not the slightest legitimate reason for taking his affidavit in March, 1881.

In reply we called (complts, ii, 1533) *George W. Rowe*, the man whom Stephens subsequently pointed out as his hireling. It appears from the deposition of Rowe (p. 1536) that in 1881 Drawbaugh came to him, asked him whether he remembered the year he worked for John Stephens and whether he was with him at the time, and that Stephens had referred Drawbaugh to him. Rowe then testified that he was hireling to Stephens in 1876 (and this date is not denied) and was his only hireling during that year; that he remembers that while he worked there Stephens went to Drawbaugh's shop to get his ram repaired, and when he came back, Stephens asked him if he had ever heard of Drawbaugh's having a talking machine, the witness and his father's family having always lived at Eberly's Mills. The witness told Stephens he had never heard of it, and Stephens said that Drawbaugh had told him of it the night before, and stated his knowledge of it in such a manner as to distinctly imply that the night before was his first knowledge of it, though the witness does not remember that Stephens said so in so many words. Rowe testified (complts, ii, 1540): —

"*Cross-Q.* 78. Now, just give the whole conversation, just exactly as you remember it, so far as it had any relation at all to Drawbaugh's talking-machine. Tell us how the conversation began, what was said in it, and how it ended.

"*Ans.* The first he asked me whether I had heard about Dan Drawbaugh's talking machine; I told him I didn't. Then he said that Dan had told him last evening that he was making a talking-machine to talk from one place to another by a wire. That was all that was said about it; if anything else was said about it I don't remember."

Of course, if this man was the hireling referred to in Stephens's testimony, Stephens's date is shifted over to 1876, and thus not only another blow is given to the value of that whole class of testimony,

but a fatal blow is given to the defendants' case by this proof that in 1876 B and F — the broken tumbler and tin can — were the instruments Drawbaugh was exhibiting.

If the testimony of the witness, George Rowe, could be assailed, that is to say, if he was not the hireling referred to in Stephens's testimony, it would have been a very easy matter for the defendants to have ascertained from Stephens who the right hireling was, and to have called him or accounted for his absence; but they have done neither. In fact it is clear, from Rowe's uncontradicted testimony (p. 1536), that Stephens named him to the defendants as the hireling referred to. It would have been very easy for them to have called some member of Stephens's family, to whom he says he spoke, but they did not do that; they have produced a witness, Henry Otstot (defts, surbtl, 360), who testified that he was not Stephens's hireling, but went there with him at a time which he thinks "as near as I can recollect, was between 1870 and 1871," and happened to see something which Drawbaugh told him was a talking machine.

Otstot says that he saw C on this occasion and does not recollect of seeing any others; he does not pretend that it was talked through, though he asserts positively that he and Stephens were together the whole time they were in the shop. On the other hand Stephens testifies (defts, i, 261): —

"*Q.* 15. Please look at instrument C, and state when to the best of your recollection you first saw it.

"*Ans.* I could not positively tell when I first saw this one; I saw it, but I couldn't state when.

"*Q.* 16. To the best of your recollection did you see it before or after the year 1875?

Ans. I am not positive on that; I think it was after 1875; I saw it, I am certain, in 1876; I saw so many, you see, I am not positive."

Whatever the value of such testimony as Otstot's might be if it stood alone, it is worth very little when taken in connection with the failure of the defendants to produce the hireling *or the members of Stephens's family referred to* after we have produced the man who was pointed out by Stephens as the hireling, and to whom he spoke of Drawbaugh's talking machine on his return from the visit.

No. 34. *Ezekiel Worley*, p. 265. — Age, seventy-one; farmer; says that he once had a transaction with a Mr. Jacob R. Miller abou

some logs, the date of which he cannot fix, and in the course of hunting for a log carried away by a freshet he went to the shop at Milltown with a Mr. Taylor, and then he says: —

"*Q.* 17. Now state whom you saw in the mill, and what transpired there.

"*Ans.* We saw Mr. Daniel Drawbaugh; that is too difficult for me to tell what transpired there; we were looking at his machinery, his different things, — his clocks that he had invented, run by telegraph, or not by telegraph, but by electricity, and a good many things; I can't just tell you what all, for he was a man that had a great many notions agoing, among the rest, his telephone — talking machine, as we called it at that time, telling about it."

He thinks that Drawbaugh showed him some things which he said belonged to the talking machine, but did not talk through any; he talked about working it on the principle of telegraphy. That was his idea; but he could not identify any machine. See in connection with this witness, Taylor, No. 100, p. 214, *infra*, and W. N. Miller, No. 103, p. 218, *infra*.

No. 35. *Henry N. Shoop*, p. 267. — Age, thirty-three; carpenter; has known Drawbaugh fifteen years. States that he saw his alleged talking machine for the first time in the latter part of August, 1873; went to see Harmon Drawbaugh about a band for a picnic; saw the glass tumbler F, and was told by Harmon Drawbaugh that it worked by a battery of electricity and that his uncle Daniel had made it. Why did he not see C and I if the defendants' story be true? Knew nothing more until in February, 1877, he moved to Milltown and thinks that while he lived there he saw D, and subsequently some other instruments. He made an affidavit in February, 1881.

No. 36. *Rufus K. Shireman*, p. 271. — Age, twenty-eight; Shiremanstown; painter; has always known Drawbaugh; has frequently been at his shop. He says that at a time "not less than eight years ago," but he cannot say whether it was in 1872 or not (he testified in May, 1881), though it was in the fall of the year, he first saw at Drawbaugh's shop instruments which Drawbaugh said belonged to the talking machine; he says that B and F are those instruments. Did not then speak through them. About three months,

certainly not more than six months, afterwards (ans. 26, 55) he went again to Drawbaugh's shop and says that he saw B and F and other talking machines and listened and heard speech through the talking machine. The instrument at which he listened and through which he heard (ans. 25, p. 273) was fastened against the north wall of the building. Has been there since, up to the present year, but cannot say when nor how often. At these later visits Drawbaugh was at work on talking machines and said he was making improvements all the time (ans. 43–48, p. 274). At these subsequent visits has seen E, A, I, D, but does not remember seeing any others (ans. 39–42, p. 274). Cannot say which of these last named four he saw first. He says that A. G. Snyder was present, but they do not call Snyder. F and B, when he first saw them, were, he says, in the same condition as now, except that they were better coated inside; afterwards he says that he saw some of the four — A, E, D, and I — in his first visit in the fall of 1872. He says that at the time of his second visit, some three months later, which would be the beginning of 1873, he saw A, B, E, and I.

P. 277. "*X Q.* 69. At the time of your second visit, some three months later, what other talking instruments besides F and B did you see?

"*Ans.* Those four lying on the table, — A, D, E, and I."

Drawbaugh said that when he got through making improvements upon his talking machine (p. 378, ans. 81), "He was just going to make the grandest thing out."

This deposition carries its condemnation on its face. In the first place, of all the instruments produced and alleged to have been made before the date of Mr. Bell's patent there is not one which could have been "fastened against the wall of the building" and used as a receiver. The receivers alleged were the tin can B, the round cuspadore-shaped instrument I, the round instrument A, and the other round instruments D and E. Either the witness is entirely wrong as to dates or his memory is entirely worthless.

Again, his direct testimony substantially implies and his cross-answer 69 specifically states that at the very beginning of 1873 he saw A, D, E and I. Now there is not a pretence in the case that A existed within eighteen months of that time, nor that D and E ex-

existed until at least two years later. He also states (ans. 43–47) that Drawbaugh was habitually at work on his talking machine whenever this witness went to his shop during the last eight years; that is, from 1872 to 1880 or 1881.

No. 37. *Jacob Hawn*, p. 278.—Age, fifty; Wormleysburg; blacksmith; has known Drawbaugh for twenty years. Says that once at Drawbaugh's shop he saw F and B. He does not undertake nor pretend to state when he saw them; says expressly that he cannot. When the ingenious leading int. 12 asked him to state how long before May 27, 1872, the date when he moved to Wormleysburg, he saw the instruments at Drawbaugh's shop, he said he could not; and he nowhere states when he first saw them. He does say that he has visited the shop every year since May, 1872, and that Drawbaugh told him that he was making improvements upon his instrument and that it would take the place of the telegraph and would be better. On the first occasion when he saw them they did not talk through them, and Drawbaugh assigned as a reason for not doing so that his wires were out of order; during his various visits to the shop Drawbaugh displayed more interest in explaining to the witness his talking machine than about anything else he had; Drawbaugh has always said that it would be a better thing than the telegraph and would be a success (x-ans. 43, p. 282). During several pages of cross-examination his continual answer as to facts and dates is that he cannot tell and cannot remember. On redirect examination a considerable number of exhibits were shown him, and he was asked whether some of the instruments that he thinks he saw, resembled those shown him, but which he cannot identify, and he says he thinks they do.

The amount of his testimony is that at some time or other he saw something at Drawbaugh's shop which he was told was a talking machine, and he does not know when it was nor what it was that he saw; and he substantially knows nothing except that which he is called to testify to in chief; says that B and F were in the same condition when he saw them that they are in now, which is in the condition of being mere wrecks.

No. 38. *Henry M. Darr*, p. 284. — Age, fifty-six; Lower Allen; laborer; has known Drawbaugh twenty-five years. He says that in the spring of 1875 he sold some potatoes to Drawbaugh, and then saw a talking machine, — A; listened at it, and heard talk through it; does not know what Drawbaugh talked into. He is another witness *against* the existence of D and E in 1875. If they had existed, they would have been shown and used; they were far better than A with any transmitter. Witness testified on cross-examination that he has frequently been at the shop since then; has seen no other instrument; Drawbaugh never spoke to him of any others; does not know what business has been carried on at the shop, except that he has a general idea that two or three years before he testified they made faucets. In effect he was a frequent visitor at the shop and remembers nothing except what he is called to testify to in chief, and can give no dates of anything.

No. 38. *Norman Kahney*, p. 288. — For the Kahney family, see abstract of complainants' proofs, *infra*.

No. 40. *William Eppley*, p. 293. — Age, fifty-one; farmer; known Drawbaugh twenty years; was at Drawbaugh's in 1873 and 1874 several times, and says that he has never been there since May or June, 1875. When he was there he says he saw F and B; does not remember A, though he thinks he may have seen something similar to it; cannot identify even F and B positively as the ones he saw; has no memory of any particular visit, or any particular occurrence, but only a vague impression on his mind; he testified as follows (p. 294): —

"*Q.* 10. What did he tell you about his operating his machines?

"*Ans.* He told me that he had tried it on wires that he had strung for several miles on fences or trees, I forget which, to see how far he could carry the sound distinctly; that he was operating on that.

"*Q.* 11. Did he say from whom he had procured that wire, and what description of wire it was?

"*Ans.* He told me that he had got — still, I am not positive — from Mr. Gorgas, common fencing wire, that he used to use some years ago. Mr. Gorgas had used it for fencing wire."

This is not true; no one else pretends to have seen any such cir-

cuits; Drawbaugh described his circuits very fully on direct examination and does not refer to this; Drawbaugh says (defts, ii, 1052) that he once insulated the wires of Heck's wire fence in the night, after dark, and tried some instruments on them which he thinks were F and B, not for the purpose of speech at all, but merely to see whether the ticking or motion of the clock would produce a sound at the receiver; that he did not get wire for that purpose from Mr. Gorgas and did not tell the witness that he had.

No. 41. *Henry B. Eberly*, p. 246. — Son of Christian Eberly; age, thirty-one. In the spring of 1867 moved away from Eberly's Mills to New Cumberland; December, 1870, moved with his father from New Cumberland to Shiremanstown; May 27, 1873, went to Williamsport and has never been back in Cumberland County since. Says that before he went away he saw F and B; that during the war and before 1864 Drawbaugh spoke to him about attaching an instrument to the office, by which he could hear from his house. On cross-examination it appears that Drawbaugh's shop was a place of considerable resort for the neighbors. He says that he saw F and B in 1865 and not later than 1866. That is untrue; Drawbaugh in giving his own dates does not even allege that they were in existence as early as that.

No. 42. *Daniel A. Hamacher*, p. 302. — Age, twenty-nine; now a school teacher at the Gorgas schoolhouse, a short distance from Milltown. He says that Feb. 1, 1876 he was teaching at the Cedar Run school and with a number of his pupils went to visit Mr. Strong, who then taught at the Cedar Hill or Gorgas schoolhouse, about a quarter of a mile from Eberly's Mills; he says (p. 302): —

"*Q.* 9. How do you fix the date?

"*A.* On the last of January and the first of February they were putting new desks and furniture in the house in which I taught — the Cedar Run School, Lower Allen Township.

"*Q.* 10. How are you able to fix these two days?

"*A.* From the book of the secretary of the Lower Allen School Board, and from my own report given to the directors, and also the report book at the Cedar Hill School.

"[*Answer objected to by* Mr. STORROW, *unless all the writings referred to are produced.*]

"*Q.* 11. Have you examined any or all of these reports recently for the purpose of fixing the date?

"[*Question objected to as above.*]

"*A.* Not the secretary's recently; the report book of the Cedar Hill School has been in the school-room in which I taught for the last three consecutive winters; I used it. The other books I will bring if I can get possession of the secretary's book; the two report books I can get."

He says that after visiting the school that day he and some of his pupils went to Drawbaugh's shop on account of an electric clock which they had heard of; that at Drawbaugh's shop he saw some talking machines, and out of those shown him says that he identifies A, but cannot identify any others, and says that Drawbaugh told him that they worked by means of electricity, and that the time would come when you could talk to San Francisco, and that his talking machine would take the place of the telegraph; that he had an instrument there for telegraphing. "I asked him why he didn't get it patented, and he said the speaking machine would take its place." They stayed at the shop an hour or two on this occasion, and although they examined everything else the alleged talking machine was not used, and no attempt was made to use it. Frequently went to the shop afterwards, and saw new talking machines, but he first heard talk through them between April and June, 1879. On cross-examination he says he went to see Drawbaugh's machinery because his clock and his speaking machine were common talk in the community (ans. 47-49, p. 307). Did not hear talking machines on the occasion of this visit (ans. 55, p. 307); did not see their inside. Witness does not understand anything about their operation and does not pretend to; when he went to Drawbaugh's in 1879, he knew telephones were in general use in the community, but that fact was not referred to in their conversation (p. 370).

It is difficult to believe that an acquaintance of Drawbaugh's and a man of inteiligence enough to be even a country schoolmaster would have gone to Drawbaugh's shop, and for the first time talked through a talking machine there in 1879, when they had attracted great attention in the community, without some reference to the fact that the witness had seen them and known of them before speak-

ing telephones were ever heard of in the world, if such were the fact.

P. 321, cross-ans. 170, he says that the first time that he heard that Drawbaugh claimed to have invented the telephone before Bell was some time last fall, though he did not hear Drawbaugh say so; it was general gossip to that effect; that was after the suit began.

The cross-examination shows that the witness has very little memory or certainty about any matters connected with Drawbaugh or about the matters he testified to in chief. He is not a man of any definite recollection on any subject.

His testimony had been forestalled by an affidavit made the winter before testifying, when there was no lawful occasion for it.

He undertakes to swear to Drawbaugh's alleged poverty, and he says that during one summer school Drawbaugh's children went to school to him as paying scholars at the very small rate he usually charged, and that Drawbaugh did not pay him promptly, and he went there to dun him (p. 311):—

"*X Q.* 90. You say that he showed you his talking machine in 1879, and said some words through it at the time you went there to dun him. He had rather a habit of showing his contrivances and talking a good deal about what he was going to do with them to people who went there to dun him, had he not?

"*Ans.* He took delight in showing his inventions."

After the cross-examination was concluded, he was re-examined with a view to meeting the objection made to his tenth and eleventh answers,—the non-production of the books. It will be observed that in his tenth and eleventh answers he said that the visit was when new desks and furniture were being put into the house where he taught, and that he fixes those two dates from three books which he named, though he had not examined them recently. Upon re-examination he was asked whether he had with him any of the books referred to in the tenth and eleventh answers, and he produced Strong's report book of the Gorgas school, and says that he got it that morning, being the second day of testifying, from the secretary of the school board. On re-cross-examination he testifies as follows (p. 315):—

"*X Q.* 125. I now understand you to say that of the three books

referred to in your tenth answer, the only one that gives you any information to help you fix the dates referred to is the report book of the Cedar Hill school, which you have produced this morning. Is that so?

"*A.* Yes, sir."

"*X Q.* 140. In the report from which you quoted in your one hundred and sixteenth answer, I do not find any record that school kept on Tuesday, the first day of February, 1876. I wish you would point out the entry in the attendance column to show that school was open on that day. Begin first, if you please, in the boys' half, and then go to the girls' half.

"*Ans.* It is an error in his count there; I fix my date from this; if that is error, I have erred."

This testimony of the witness about those books, particularly his cross-ans. 125, was a deliberate falsehood. Having, on the first day, stated that he fixed his visit by the date when new furniture was put into his own schoolhouse, and that he fixed that date by three books, he comes on to the stand the next day, and says in substance that he has examined those books, and that only one of them fixes that date. In point of fact that one does not fix the date, and the entries in it are hardly consistent with his story, inasmuch as they show that school did not keep at the place which he alleges he visited on the day when he says that he went there. But it is his statement about the others which is specially untrue.

Subsequently the complainants called George W. Mumper, president of the school board (complts, ii, 1110), and with him produced the two books that Hamacher had referred to in his first day's testimony as fixing the date of the new desks, but which on his second day's testimony he says did not fix it. *These two books do fix the date distinctly* and put it about a year earlier than Hamacher swore to, showing that the desks were ordered by a vote of the board Dec. 2, 1874, and that a note given for them was finally paid May 22, 1875. Afterwards the defendants called W. H. Zearing, secretary of the school board at the time Hamacher testified, and he testified on cross-examination (defts, surbtl, 134), that Hamacher, while testifying, came to him and *examined all three books;* Hamacher afterwards was recalled by the defendants to try to explain himself (defts, surbtl, 520), and he had to admit on cross-examination

that such was the fact. Now whether this change of date be very material or not, the fact is that this witness first swore that he fixed his date by the putting in of the desks and stated that the *three* books of records would show that date to be Feb. 1, 1876. He went to look at the books, did look at them, found that two of them upset his story and put it a year earlier and that the third one said nothing about the desks; he produced the third one and deliberately swore that the other two did not fix the date at all. Having sworn to a story which turned out to be false, though not very important, he deliberately lied about the contents of those books in order to preserve his own consistency.

No. 43. *John F. Rupp*, p. 324. — Says that he was one of the pupils who visited with Hamacher; he agrees in general terms with Hamacher's story, and he also undertakes to fix the date of the visit by the putting in of the desks and by nothing else. He had made an affidavit the previous winter. He again was recalled by the defendants, after the matter of the books had been put into such a disagreeable shape for them, and concludes (defts, surbtl, 517) that the visit was not at the date of changing the desks, but was made because school did not keep for another reason; he has the audacity to produce his diary and state that the desks were put in Jan. 4, 1875, and *that he had it written in his diary all the time.* What is the Court to do with a couple of witnesses who thus conduct themselves and confess their error, not when they discover it, but only when it has been proved against them? He made an affidavit for the defendants.

No. 44. *H. B. Musser*, p. 328. — Age, forty-three; farmer; has known Drawbaugh twenty years; has been at his shop and there seen a talking machine; he undertakes to fix the date of this after the usual style of the defendants' witnesses, by showing from his farm book that on June 27, 1874, he had a mowing machine repaired, and then undertaking to connect that with the talking machine by asserting a recollection, first, that the repairs were done at Drawbangh's shop, and second, that it was upon that visit and not upon any subsequent visit that he saw a talking machine. He says that

they talked through it and he listened and understood, and Drawbaugh said it would be cheaper and quicker than telegraphing. He says that afterwards, in June, 1876, he saw a talking machine there. He alleges that upon his visit on the 27th of June, 1874, he saw F and B, and that in June, 1876, he went again to get his mowing machine fixed and saw A. There is no pretence in his case that he has not been there since; there is no statement how often he has or has not been there after that, except that he has been there several times since 1876, for the purpose of having repairs done to the bearings of his reaping machine (p. 336).

We have in the case of this witness positive proof from his own deposition that the first time he saw the talking machine was certainly not in 1874, — was at least a year, and we do not know how much more, after 1874. On direct examination, referring to the time when he first saw a talking machine there, he testifies (p. 330):

"*Q.* 13. Where was he when he was talking, and you when you were listening?

"*A.* He was in the north room and I was in the south, and there was an entry between those rooms that went into the machine shop."

P. 335. "*X Q.* 72. In what story of the mill were the rooms referred to in your 13th answer?

"*A.* In the second story, counting the basement as one; there was still another story above the one I was in."

Either he made a miscount of stories, or the examiner got the answer wrong, but the next makes it clear: —

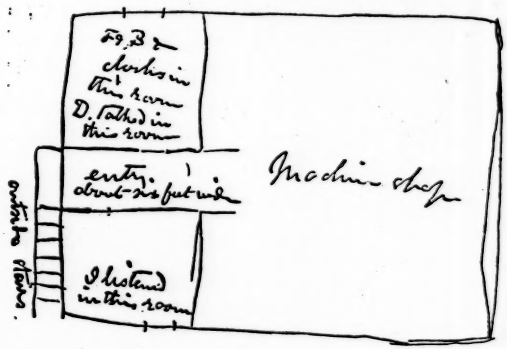
"*X Q.* 73. Did you see the clocks on the same story?

"*A.* Yes, sir."

That was the story where Drawbaugh worked, and where the axle company carried on business, usually known as the second story, not counting the basement.

"*X Q.* 74. Please make a little drawing of how that story was partitioned off.

"*Ans.* (Witness makes one which is marked 'Musser's Diagram.') It is as follows: —



This diagram shows two corner rooms, the entry way between them and the outside stairs; *none of these existed until the spring of* 1875. His whole story, therefore, of talking from one of these rooms to another and crossing the entry in 1874 is entirely false.

The witness says that the next time he saw any talking machine was in June, 1876; he does not mention any visit, and it rather appears from his testimony that he made no visit there between 1874 and 1876. It is clear, therefore, that the visit he made there, in which he saw the rooms in the condition described, and B and F in them, could not have been before June, 1876. We are thus brought to the fact, fatal to the defendants' claims, that this witness, going there on a date now fixed as certainly after the spring of 1875, and according to his own testimony certainly not before June, 1876, had exhibited to him in operation, and of course as the best instruments Drawbaugh had, F and B.

But that is not all that fixes the date. He was asked (cross-int. 44) what else he saw on the first visit, which he thinks was in the summer of 1874, and he says, clocks; and being further examined about them, he says he saw three (p. 333):—

"*X Q.* 47. Describe them.

"*Ans.* One was a clock that he had finished to go by electricity, extending the wires into the earth, and another that he had was not finished; and another was an old eight-day clock that he had there.

"*X Q.* 48. What kind of a case did the finished clock have?

"*Ans.* It was a longish, pretty near all one glass in front; you could see all the works.

"*X Q.* 49. How tall was it?

"*Ans.* I could not tell you how tall it was exactly; it was as tall as the ceiling was from the floor, pretty near."

Clocks answering to that never existed until 1877; the electric clock in a long case nearly as high as the room with one glass in front finished and another in process of construction, but not finished, — no such thing ever existed in 1874.

This is one of the many instances where an attempt is made to fix the date of seeing an alleged talking machine by the date of some unconnected fact, — in this case repairs to a reaper, — tying the two together merely by an effort of memory; the incidents which we are enabled to discover in this case show that that connection is purely the result of the imagination, and carry over the visit to a date after our patent.

No. 45. *Isaac B. Millard*, p. 338. — Age, thirty-six; Newberry; farmer; has known Drawbaugh all his life; was married Nov. 11, 1869, and before that lived at Ezra Gilbert's at Eberly's Mills; says that he saw B at Drawbaugh's shop between 1867 and 1869, before he was married; was frequently there before his marriage and heard talk through it. It was on the second floor and the man talking was out on the bank fifty yards off. About the time he moved on to a certain farm which he said was in August, 1874, he was at Drawbaugh's shop frequently, and says that he there saw A, D and E (ans. 31, p. 341); D and E did not exist then; he afterwards became a little doubtful about the dates of D and E, but asserts that he saw them before the Centennial; was at Drawbaugh's shop again in 1880 and saw some instruments.

A few comments are enough to dispose of this testimony. In the first place he never heard speech through F and B, because they cannot transmit, and in the second place Harmon Drawbaugh expressly testifies that at a period after that stated by this witness they did not attempt to get speech through F and B (p. 173, *infra*). The statement of the witness that the line ran from the shop to the bank fifty yards off in 1869, and that somebody was talking out there may have been true for 1878 or 1879, because from time to time at that period or after some time in 1877 it is alleged that such a line was put out; but Drawbaugh in describing his circuits does not pretend to such

an arrangement in 1868 or 1869. Not a witness ever saw anything of the kind, and the Court has had witness after witness from the Faucet Company then carrying on business there.

The witness's dates are shown on cross-examination to be entirely wrong. Having testified that he moved to a certain farm Aug. 20, 1874, and that "about that time" he was at Drawbaugh's shop frequently and saw talking machines, he testified (p. 341): —

"*Q.* 31. Please look at these machines, some dozen or more now shown you, and see if you find any of the machines that you saw about that time?

"(Witness picks out of the basket machines A, D, E.)

"*Ans.* This one here marked 'A' had two wires attached to these here posts, and you listened at this hole (indicating mouthpiece); I recognize this one ('K') as one that I have seen and I have seen this one ('M'); I have seen these two ('D and E'), or something similar."

There is no pretence that K was made before 1879 or that M was made before 1878. On cross-examination he testified (p. 348): —

"*X Q.* 81. When you listened at instrument A what instrument was the other person talking into?

"*Ans.* I don't know exactly whether it was one of these other instruments or not (picking up O from among the others); this ('A') was the one I listened to; I recognize it by this hole in the side.

"*X Q.* 82. Did you see the one that the other person talked into?

"*Ans.* I saw it; but I don't remember that of examining it close, more than they told me I should listen there (pointing to A), and they would speak into the other.

"*X Q.* 83. Was it a wooden instrument something similar to these before you?

"*Ans.* I took it to be a wooden instrument something similar to that (picking up O)."

Now there is no pretence that O existed before the summer of 1876.

No. 46. *John C. Smith*, p. 349. — Age, twenty-nine; Steelton; machinist; has known Drawbaugh all his life. The facts about this witness are striking, and are not creditable either to him or to the defendants. His father lived at Milltown from an early period

down to 1878, and the witness, therefore, had opportunity to be at Drawbaugh's shop pretty often until two years after Mr. Bell's patent.

The story put forward by him is that from April, 1872, to April, 1873, he was engaged as fireman on locomotive No. 502 on the Pennsylvania railroad, and that his trips were such that he generally went home to his father's to spend Sunday, and upon these occasions went to Drawbaugh's shop. He saw, he says, instruments which he thinks were F and B, and to the best of his knowledge Drawbaugh talked through them and he listened, though he does not pretend to be at all positive about it. He says that the general occupation at Drawbaugh's shop on Sundays was talking and experimenting, sometimes with talking machines and sometimes with other things; he thinks he listened at B; supposes that Drawbaugh spoke into F; Drawbaugh was then experimenting to make it better (p. 352). He admits (p. 353) that he has been at the shop every year down to 1880; he cannot tell how often, but rather implies that he has not been there much since April, 1873. By cross-int. 69, he is asked whether the change of his occupation after April, 1873, did not deprive him of the leisure which he used to employ in going to Eberly's Mills, and he assents. He gives a list of a number of inventions which he says Drawbaugh has made; he does not know what work was going on when he first saw F and B at the shop. He testified a little to Drawbaugh's alleged poverty; that Drawbaugh was "always hard up," but on cross-examination he said (p. 358): —

"*X Q.* 94. Why was Dan always hard up; did he drink or was he lazy, or what was the matter?

"*Ans.* He spent the most of his time experimenting; that is the reason why I thought he was hard up; he was always sober and industrious.

"*Q.* 95. Is he a good workman?

"*Ans.* First class.

"*X Q.* 96. Was he a man who could have got good employment and good pay around here if he had a mind to?

"*Ans.* He told me they sent for him to come to Philadelphia, different times; that they would give him $5.00 a day."

Substantially, then, the story put forth by this witness is that from April, 1872, to April, 1873, he was at Drawbaugh's shop on Sundays and then he first saw and talked through F and B; that he was

there afterwards down to 1880 and saw other instruments, but did not frequent the shop much after 1873. The whole value of his testimony as to dates rests upon the assumption that his visits to the shop were mostly in 1872. Now the facts turn out to be in the first place that he worked for the Faucet Company for about a year in 1868 and 1869 (Jacob Carns, complts, ii, 894 and 910). That the defendants did not ask him to testify as to the existence of any talking machine there at that time, and that upon proof of his employment there they have not recalled him to, must be taken as conclusive evidence that he never heard of the existence of a talking machine during all the year that he worked for the Faucet Company, nor before 1872, although he was born and brought up in the village and worked in the shop. This is particularly clear from the fact that the defendants have called witness after witness in surrebuttal merely to swear that they heard the thing spoken of, and if this witness could have contradicted the complainants' witness, Jacob Carns, his fellow-workman, he certainly would have been called for the purpose. It finally turns out also that the witness Smith worked at Drawbaugh's shop during a considerable part of the year 1877 to build a little steam engine there; this was proved by the cross-examination of Drawbaugh (defts, ii, 1006): —

"*X Q.* 1154. One of the witnesses in the interference case to which I have referred is named John C. Smith; is he the same John C. Smith who has been called by the defendants as a witness?

"*Ans.* Yes, sir.

"*X Q.* 1155. On page 121 of the interference record [complts, exhibits, iv, 202], in answer to interrogatory 3, he states that in the summer of 1877, he was in Daniel Drawbaugh's shop working at a small stationary engine for himself; do you remember his working on that engine?

"*Ans.* Yes, sir; I remember he was working on an engine, but I didn't remember the time; he had been working on it for quite a while, but I don't remember any particular period.

"*X Q.* 1156. How long a time in all should you think he worked on it in that shop?

"*Ans.* I don't know how long; my idea would be it was more than a year he was working on it, off and on; it may have been more."

His continued presence in the shop during the second year of our patent was kept out of his deposition.

This fact destroys the value of his attempt to fix the date as in 1872, and is destructive of the defendants' allegation that the talking machine was well known during the time of the Faucet Com-

pany. These facts were known to the defence or at least to Drawbaugh at the time this witness testified, and putting forward by this witness the story which the defendants did put forward, and omitting to make known these facts to the Court, are conduct which entitles us to say that the defendants do not, and do not intend, to bring before the Court the whole story or the whole state of facts bearing upon their claim, *but present a partial and substantially untruthful statement of matters which are within the personal knowledge of the claimant and not of the complainants.* It further will be observed about this witness that if his story be true the only instruments he saw up to April, 1873, were F and B, and that they used these and never used C and I. The witness's deposition is worthless for another reason, namely, that inasmuch as he was there in the summer of 1877 when they were building clocks, his memory is worthless about Drawbaugh's electrical contrivances, for while asked repeatedly what inventions Drawbaugh experimented on, he does not mention the clock or any of his electrical contrivances (cross-ans. 88, 89, 90, p. 357).

No. 47. *Levi Charles Sternberger*, p. 359.— Age, fifty-one; miller; lived at Eberly's Mills from Feb. 1, 1871, to October, 1871. Says he has never been at Drawbaugh's shop since; says that while he lived there Harmon Drawbaugh showed him B and F; he did not hear any talk through them, but heard Harmon Drawbaugh say they had talked through them. Says that he also saw C and I.

No. 48. *Daniel Fettrow*, p. 362. — This witness is one of the most important in the case, but his true value cannot be appreciated without considering his relation to the claimant. He has been since 1866 the blacksmith of Eberly's Mills, and during all that time has known Drawbaugh. In the beginning of 1866 Drawbaugh purchased an estate in Eberly's Mills consisting of a double house and a blacksmith shop, a few feet from it, in which Fettrow had already carried on his business for two years. Fettrow immediately hired the blacksmith shop and half the house from Drawbaugh, and from that time until the spring of 1876 they lived under the same roof. At that time Fettrow bought from him the whole house and blacksmith shop, and Drawbaugh bought a house in Mechanicsburg in which he lived a year and then moved back to Eberly's Mills (pp. 368, 369). During all the period since 1866 the relations of Drawbaugh and Fettrow have been as intimate as would naturally be expected from

the fact that they occupied the same house and from the fact also that they were the only two regular mechanics in the village. It also appears positively that Fettrow did a great deal of blacksmithing for Drawbaugh in the business of the latter, and from time to time went to Drawbaugh's shop to get machine work done. This has appeared abundantly at various places (complts, 577, 662, 978, 988; defts, surbtl, 72, 73, 529, 988; defts, i, 369, 370).

William Fettrow, a grown-up son of the blacksmith, who lived with his father, was a constant visitor in Drawbaugh's shop, and within the last few years has been employed by Drawbaugh and Chellis as a workman. It is certain that Drawbaugh could not have done any considerable work on talking machines and made it known to the public or any portion of the community without Fettrow's knowing it and knowing all about it, and without constant talk between them on the subject. This is perhaps even more true of the son, from the fact that he was such a constant frequenter of the shop, yet they did not call him. His continued presence in the shop is proved by the following references: complts, 577, 984, 1013, 1125, 1226, 1251, 2041; and defts, surbtl, 530. His deposition in the Faucet case (complainants' exhibits, iv, 175) shows that he was twenty-one years old in 1879. Jos. Ditlow, called by defence, proves that W. Fettrow as one of the loafers whom he met at Drawbaugh's shop *while testimony was being taken* (defts, surbtl, 530).

Daniel Fettrow, thus situated with relation to Drawbaugh, called as one of the defendants' witnesses, testified unequivocally that he *never saw any talking machine before a date which he fixes as about March*, 1875 (ans. 13-32); and he does not pretend that Drawbaugh had ever before spoken to him of it; that then Drawbaugh talked to him through an instrument; that he heard and distinctly understood what was said, and that the instruments were D and E. Daniel Fettrow says (defts, i, 364): —

"*Q.* 16. State how he came to show you the talking machines the first time you saw them.

"*Ans.* The time that Bear was starting this axle machinery Drawbaugh was rather counted as the head man of getting up the machinery; that is, putting up the shafts, and Drawbaugh came to me and told me to come down to the shop to show me to make some levers, and I went down. After he had showed me how they were to be made, and I was just in the act of leaving the shop, he said to me, 'Oh, Daniel, see here'; and he went on ahead around into another apartment of the shop; then he showed me this machine, which was then called the talking machine amongst us at home there.

Then he showed me how to hold it to my mouth and to my ear, and then he went around into another room, and then he spelled Harrisburg. After he was done with that he sang notes; then I said into this machine, 'All right'; then he came back to me.

"*Q.* 17. Did you distinctly hear and understand him when he was spelling and singing into the machine?

"*Ans.* Yes, sir.

"*Q.* 18½. When he came back to you did he say whether he heard you when you said 'All right' into the machine?

"*Ans.* Yes, sir; he did.

"*Q.* 18. Please look at the machines now shown you, marked 'A, B, C, D, E, F, G, H, I, J, K, L, M, N, O,' and see if you find the machines by which you and Mr. Drawbaugh talked to each other at that time, as you have testified.

"*Ans.* Figures were not mentioned at that time, but there was a curl on like that (taking up D). I would not just positively say that is the one, but it was just like that. Now here is one (taking up E), that when you take the lid off is just the same way, so that I could not positively say.

"*Q.* 19. Do you remember whether the instrument Mr. Drawbaugh talked into was like the one you listened at, or did you see the instrument he talked into?

"*Ans.* No, sir; I did not see that one.

"*Q.* 20. I understand you that you used the same instrument to listen at and to speak into; am I correct?

"*Ans.* Yes, sir.

"*Q.* 21. How did the size of that instrument compare with the size of this instrument D?

"*Ans.* As near as I can tell it was the same size; it had a mouthpiece the same as that.

"*Q.* 22. State what conversation you and Mr. Drawbaugh had about the talking machine at that time.

"*Ans.* After he had talked to me through the machine, he came back to where I was, and he said that this would go ahead of telegraphing; he said then that if I would want to telegraph to anybody I would have to pay so much a word, and with this machine (meaning the speaking machine, as we called it then), I could, for five, six, eight or ten cents, speak myself to the man or person that I would want to talk to myself, and it would be cheaper than telegraphing."

P. 366. "*Q.* 26. You had heard his talking machine spoken of in the neighborhood before, had you?

"*Ans.* Oh, yes.

"*Q.* 27. What did people say about it?

"*Ans.* Called it tomfoolery.

"*Q.* 28. Do you recollect whether you saw these two instruments B and F at the shop at or about that time?

"*Ans.* This here one I seen; I don't know whether he called it B or F, but that one I saw (indicating B); I have no positive recol-

lection of the other; I might have seen it. (The witness picks up instrument F and then says:) I did see that; I remember it after picking it up.

"*Q.* 29. Do you recollect whether you saw this instrument C at the shop at any time? If so, when to the best of your recollection?

"*A.* I can't positively say that I seen that.

"*Q.* 30. Do you recollect at any time seeing this large box I at the shop? If so, when to the best of your recollection?

"*Ans.* I seen one standing on the counter or bench, after I talked with the speaking machine; some time afterwards, I don't mean the same day.

"*Q.* 31. Do you recollect whether at any time you saw this instrument A at the shop? If so, when to the best of your recollection?

"*Ans.* I have saw a machine lying on the bench like that too — mouthpiece — with that peculiar shaped mouthpiece, and some with round mouthpieces; I could not tell you when; it was after we talked together; I never paid no attention before we talked together; I did not see it before that.

"*Q.* 32. Do you mean you did not see the talking machine until the time when you talked together, as you have testified?

"*Ans.* I never had seen the talking machine till that time.

"*Q.* 33. From that time when you talked together down to the beginning of the year 1880, were you or were you not frequently in Mr. Drawbaugh's shop?

"*Ans.* Yes, sir.

"*Q.* 34. As you would be there from time to time, during those years, from the summer of 1875 to the beginning of 1880, did you or did you not see other talking machines, that you had not seen in the summer of 1875?

"*Ans.* Yes, sir.

"*Q.* 35. How often do you think you were in the shop during the year 1876?

"*Ans.* I might have been there once a month, and maybe once a week for a while; I was back and forward pretty often, as business called me to go there.

"*Q.* 36. How often in the year 1877?

"*Ans.* About the same as before; whenever business called me there I went there.

"*Q.* 37. How often in 1878?

"*Ans.* I can't answer any other way but the same; whenever business called me to go to see him for some certain purpose, I went.

"*Q.* 38. And would make the same answer as to the year 1879?

"*Ans.* Yes, sir.

"*Q.* 39. Please look at this machine H, having the bell on top of it, and the tapering box, and state whether you ever saw it at Mr.

Drawbaugh's shop, and if so, give your best recollection as to the time you first saw it.

"*Ans.* Oh, yes; I have often seen it there; it was after me and him done the talking through the machine that I first saw it; after we done the talking together and I came into the shop and seen any of those round or oblong mouthpieces, I took it at once to be a talking machine.

"*Q.* 40. Did you see a good many machines around there with mouthpieces from time to time?

"*Ans.* Yes, sir.

"*Q.* 41. As you would be in there from time to time during the years 1875, 1876, 1877, 1878 and 1879, would Mr. Drawbaugh generally be doing something to the talking machines, or with the talking machines or not?

"*Ans.* Yes, sir.

"*Q.* 42. Were you ever in his shop at night when he was there?

"*Ans.* Yes, sir; but not often.

"*Q.* 43. About how often as far as you remember?

"*Ans.* Maybe once or twice a month; I am not so often out at night; generally at home.

"*Q.* 44. What did you find Mr. Drawbaugh giving his attention to when you were there at night?

"*Ans.* More on the telephone or speaking machine, I should say, than at any other thing.

"*Q.* 45. How late did you ever stay with him at any time, when he was working on the speaking machine?

"*Ans.* As late as ten o'clock at night."

The story of the claimant is that from 1867 to 1878 he had perfected practical instruments which everybody in his village knew of and recognized the efficiency of, and that he was famous for this invention throughout the neighboring country, and yet we have *as a fact in the case* that his friend who was constantly in the shop and very frequently worked with him as a mechanic and who lived under the same roof with him, had never been spoken to on the subject, had never seen instruments, had heard something of the sort mentioned only as tomfoolery and felt surprised when he actually knew of its existence, — and all this at a period seven or eight years after the time of the alleged practical instruments.

Fettrow then testifies (p. 367) that from the time of this visit in the beginning of 1875 down to the year 1880 he was frequently in the shop, sometimes once a month and sometimes once a week, whenever business calls him there; that as he was there from time to time he saw new talking machines, and that when he was there

Drawbaugh was generally doing something to the talking machine; that he was there maybe once or twice a month in the evening, and that Drawbaugh then was wholly working on the talking machine. Most of these statements, however, are merely in the form of an assent, given more or less freely to leading and instructive questions. Now that is the utmost knowledge which this man has upon the subject of the talking machine; and his son William has not been called as a witness.

He then testifies (ans. 52, 53, 54, p. 368) that he forged some magnets for Mr. Drawbaugh's talking machine, but he does not state when that was. He, however, had and has put into the case a full account of all he did for Drawbaugh up to April, 1876 (ans. 66–68 and defts' exhibits, pp. 1–11). There is here no charge for magnets, and in 1874–5–6 no charge even for a piece of steel out of which a permanent magnet could have been made. The magnet work must therefore have been later. (See for this, p. 180, *infra*.)

He is next called upon by the defendants to help them make out the story of the alleged poverty. He begins to prove Drawbaugh's poverty by stating that he hired his house and the blacksmith shop from Drawbaugh and occupied them as tenant from the spring of 1868 to the spring of 1876. For the first year he paid $80, and the next seven years $110 a year rent. Then the defendants undertook to have him state and he did state that Drawbaugh was always owing him money, and that he continually paid him, not only his rent when it became due, but in advance and before it became due, so that it happened sometimes that he overpaid him, and that when settling accounts at the end of each year he sometimes found that he had overpaid Drawbaugh (ans. 65, p. 369).

"*Q.* 63. Will you explain how that rent was generally paid to Mr. Drawbaugh during the time that you occupied that property as tenant?

"*A.* Through work and money paid to him and other persons; I don't know how you would put it.

"*Q.* 64. Do you remember how often you used to settle and balance up the accounts between you?

"*A.* Every year with the exception of the first year.

"*Q.* 65. When you would settle and strike a balance how would the balance stand, always in his favor or sometimes in yours?

"*A.* Sometimes in mine, — overpaid him.

"*Q.* 66. Did you keep a book account showing what you let him have along from one year to another?

"*A.* Yes, sir.

"*Q.* 67. Have you the book here, and will you produce it and show it to the examiner?

"*A.* Yes, sir.

"*Q.* 68. Please point out to the examiner, so that he can enter upon the record, the various items of money and other things that you let Mr. Drawbaugh or his family have, and charged it on the rent account during those years that you rented the property from him.

"*A.* Here they are on the following pages, 19, 27, 35, in the first book, and 25, 50, 78, 115, 133, 157, in the second book.

"[*Defendants' counsel requests the examiner to make and certify to the Court as 'Exhibit Fettrow Account' an exact copy of the account between the witness and Mr. Drawbaugh, contained in the books here presented.*]"

He thus was asked to produce his account showing everything he let Drawbaugh have or paid him during those years, and he did so; it appeared that from time to time he paid various persons on orders from Drawbaugh, or furnished provisions to Drawbaugh procured naturally enough in the way of country barter with customers of his who had no money, — they furnished provisions to Drawbaugh and got credit in that way on the blacksmith's books. Unfortunately for the truth of his story, however, his account is fatal to it. It is found in defendants' book of exhibits, pp. 1 to 5. The account does not appear to have been balanced at the end of each year, but runs along and no balance was struck or settlement entered until March 24, 1871, when the amount paid Drawbaugh up to that date appears to have been $252.49. The rent had been $300 up to that time, so that in that settlement he owed Drawbaugh $47.51. The next balance struck and settlement marked is April, 1872, and the amount paid Drawbaugh during the year was $72.47 (defendants' exhibits, p. 6); the rent for that year was $110; the balance, $37.53, was in favor of Drawbaugh. The next settlement was April, 1873, and the amount which had been paid was $88.30, leaving $21.70 due on that settlement. The amount paid or advanced by Fettrow to Drawbaugh during the year up to April 4, 1874, was $53.92, leaving $56.08 due. The amount paid during the next year to April 1, 1875, was $69.57, leaving $50.43 due. The amount paid

during the next year, from April, 1875, to April, 1876, was $58.59, leaving $51.41 due. Thus it appears from the actual production of the books that the fact is precisely contrary to what he states it, and at the end of every year there was from $20 to $60 due Drawbaugh.

Again, the impression given by a mere reading of the deposition is that these advances were mainly necessaries for the family. The account shows that that is not at all true. The items of provisions and cash, except cash paid just at the end of the year, are quite small; a large portion of the items are for metal and iron work. A considerable number of them are marked "cutter" or "Lee." This is explained by Fettrow to mean that it was work done on the nail machine which Lee and others were to pay for (x-ans. 103, p. 374); and therefore all these entries were as money accounted for in the settlements with those persons, as much as if he had been paid at the time. The moment we actually get to the accounts, therefore, every one of these statements is found to be untrue. That is not all. The ability of this tenant to pay his rent is not questioned; he was represented in the deposition rather as a capitalist who advanced to Drawbaugh; yet the fact is that Drawbaugh allowed him to let a large part of his rent run until the end of the year without being called upon, and this is perfectly conclusive proof that the story of poverty and destitution alleged on behalf of the claimant is false. Moreover, an examination of this account shows the same fact, only to a greater extent, which was exhibited by the examination of the Lee and Bayler accounts; namely, that from the beginning of it to the end there never was a time when Fettrow, a good paying tenant, perfectly responsible, the ultimate purchaser of Drawbaugh's house, did not owe Drawbaugh money enough to pay the fee for a patent.

The witness further testified that, when purchasing Drawbaugh's property in 1876, he agreed to give him $2,200, and did pay him actually $1,200 in cash; that there was or appeared to be an encumbrance of $1,000 on the property, and he retained $1,000 for that reason.

This is one of the witnesses who was called upon to repeat the alleged statements of Mrs. Daniel Drawbaugh, *whom the defendants never ventured to put on the witness stand.* He says that Mrs. Drawbaugh used to complain that Dan was always down at the shop

experimenting on these inventions, and that she used to go to Fettrow occasionally to advance her a little money on Drawbaugh's account; and on cross-examination he says that she did this several times every year.

The witness testified also that the nail machine company, as he called it, was a company of which not only Mr. Lee, Gov. Geary's brother-in-law, was a member, but in which Gov. Geary himself was interested (p. 374).

"*X Q.* 103. I notice . . . a number of items marked 'nail cutter': what were those for?

"*A.* That was a separate company, — Geary, Lee & Co., — Governor Geary."

He says that the town of Eberly's Mills consists of about fifteen houses, and, in this and his subsequent examination (p. 655), he gives a list of a considerable number of the inhabitants of Eberly's Mills at various dates.

The value to the complainants of this Fettrow testimony is enhanced by the behavior of the defendants with regard to other members of the Fettrow household. They called Fettrow's son-in-law, George May, in surrebuttal in March, 1883. On direct examination he told a story which, if true, would place him among the defendants' most important witnesses. He said that in March, 1875, he went to Drawbaugh's shop and carried on a conversation with Drawbaugh through D and E, and this date is as early or earlier than that assigned by any of the other witnesses, except perhaps Harmon Drawbaugh to D and E. It is true that he has nothing to fix it except his own statement that Drawbaugh sharpened a razor for him at that time, and that he saw these when he went to get his razor, and that Drawbaugh lived in Milltown in the Fettrow house at the time. The connection is purely an arbitrary one. He is absolutely proved to be wrong in his date. He swears that he saw H at the time when he first saw D and E, and it is not alleged that H existed until a considerable time after the grant of the Bell patent. On cross-examination, and indeed partly on direct examination, it turned out he had lived at Milltown from the beginning of 1874 down to the present time; that in the spring of 1879 he married Fettrow's daughter, moved into Fettrow's house, and has lived there

ever since. It was at once apparent that it was very extraordinary that so important a witness to the most important pair of instruments the defendants had, living alongside of Drawbaugh during this whole controversy, and in the same house with Fettrow, one of their early witnesses, should not have been called in chief. It then appeared, upon cross-examination, that at a time which he could not exactly fix, but it was "about two years ago" (that is, March, 1882, while the defendants were still taking testimony, — and as he does not fix the date, it was undoubtedly during that winter, and in the middle of their taking testimony), *Drawbaugh came to him for his knowledge about the telephone, and the result was that they did not call him.* It took two years of cultivation in the atmosphere of Milltown to ripen this witness up to the swearing point. The questions that he says Drawbaugh put to him two years before he gave evidence are pretty instructive as to the defendants' methods (defts, surbl, 994): —

"*X Q.* 140. When were you first asked what you knew about Drawbaugh's talking machine?

"*A.* It was about two years ago; *Dan asked me whether I didn't mind the time he showed it to me in* 1875."

After this question had been put on cross-examination, and answered, the defendants did not venture to ask him what reply he made to "Dan's" inquiry, nor did they venture to give any reason for not calling him at the outset. He was not a witness in rebuttal in any manner or in any sense; the whole of his testimony was purely cumulative; his deposition will be examined in connection with the other surrebuttal testimony, but it will be perceived upon his cross-examination that he was a witness of very low intelligence and worthless memory.

William Fettrow, the son, was not called at all. See *supra*.

No. 49. *Ephraim R. Holsinger*, p. 376. — Age, thirty-eight; newspaper man, and owns a job printing office; he lived at Eberly's Mills from September, 1873, to Nov. 27, 1876; says he has never been there since. He knew Daniel Drawbaugh and was frequently at his shop; he says that while there he saw at that shop talking machines "very frequently," fifty times at least, and more frequently before 1876 than afterwards." He appears from his story to have been one of the three or four persons who, to some extent, claim that they assisted

Drawbaugh in some experiments. He says that they operated B and F, and that he not only could understand what was said, but found the instruments of such extraordinary perfection that they sought to transmit words very nearly alike and could distinguish them apart (p. 379) :—

"*Q.* 29. Could you hear and understand the words that were spoken when he talked into the machine?

"*A.* Yes, sir; we would use such words which have similar sounds, knowing them to be more hard to understand than those having more contrast in sound."

In the light of the New York tests and of the performance of these instruments in the skilful hands of the complainants' experts, this story is seen to be so false as to be ridiculous. Q. 30, 35, 40 show that the defendants intend to produce him as a man who assisted Drawbaugh in his experiments and who did not merely see the machines once in a while from curiosity; he is asked about certain matters "during your experiments with Mr. Drawbaugh"; "did you and he experiment with them a good deal, or not much?" etc.

He says (p. 381) that he was often at Drawbaugh's shop at night experimenting with the talking machine, often as late as ten and eleven and twice as late as one o'clock. No one could state more strongly than he does the devotion to the talking machine which the defendants seek to attribute to Drawbaugh. He says (p. 381) :—

"*Q.* 45. From all you saw of Mr Drawbaugh's operations and employment during the time that you lived at Eberly's Mills, what was he experimenting on principally?

"*A.* The talking machine; he appeared to be crazy on it. I often tried to get information from him on other subjects, and about a half a minute's talk would turn him right on the talking machine; that is about his standing, — the way he felt all the time I was there."

P. 389. "*X Q.* 108. While you lived at Eberly's Mills was not Drawbaugh capable of earning all he needed if he would only work steadily?

"*A.* Yes, sir; he did work steadily, intently, — never lost one moment, but, influenced by some supernatural or other power, did not happen to work at such things as did or would bring him the required necessaries for the sustenance of himself and family.

"*X Q.* 109. What things did he work at?

"*A.* He put a great deal of his time in experimenting on his

talking machine; in fact, so near all his time that he got very little earned.

"*X Q.* 110. What other inventions was he working on during the three years and a quarter that you lived at Eberly's Mills?

"*A.* I do not remember of anything that he was working on except a magneto-electric machine; but whether he worked on that as an invention while I was there, or only completing a former invention, I do not know. That is about the substance of what I know about his inventions."

He was requested to repeat what he heard of Mrs. Drawbaugh's alleged scoldings about her husband's experiments down at the shop, but it did not *refer to a talking machine* (p. 382):—

"*Q.* 51. Did you ever hear her say anything on any of those occasions, or at any time or times while you lived at Eberly's Mills, about her husband's experiments down at his shop; and if so, what?

"*A.* I did. I heard her say that Dan was at that ——— old shop fooling his time away, while they, the family, hardly knew how to get anything to eat. She also told me in my office that she smashed up a lot of photographing and other things about the house in order to stop Dan from fooling with them."

Holsinger does not say when he heard this, but H. F. Drawbaugh swears positively that it was in 1876 and afterwards, *but never before* v. p. 113, *infra*).

All this testimony about Mrs. Drawbaugh's alleged statement is not only incompetent, but reflects injuriously on the defendants' case, *because the defendants have not called her as a witness.* That is a confession that her testimony would not bear out their theory.

Upon the subject of Drawbaugh's alleged desire but failure to patent his machine, this witness, instead of stating that he wanted to and could not, states that Drawbaugh said he wished to add improvements before patenting (ans. 64, p. 384).

His cross-examination about defendants' witness D. W. Smith, particularly the manner in which he evades direct answers, shows that D. W. Smith was a worthless fellow (pp. 385, 386).

The deposition of Holsinger, if allowed to stand by itself, is the story told by a man who says that he assisted Drawbaugh in experimenting, was at his shop hundreds of times, found him devoted exclusively to the talking machine, which to the witness appeared far more important and interesting than anything else, and that he did not know of anything Drawbaugh was working upon except the talking machine and a magneto-electric machine.

Unfortunately for the witness and for the defendants who rely upon him, he was a printer, and we have succeeded in finding some printed matter which came from him. We called him as a witness to prove this printed matter (complts, ii, 1210).

We did not expect him to alter his statement even in view of his publications, because he appeared to us to be a man who had made up his mind to swear to a story and stick to it right, or wrong. He is the printer who advertised Daniel Drawbaugh as an "*inventor, designer and solicitor of patents*," who printed for him his advertising card of June, 1874, in which he enumerated about eighteen inventions.

Daniel Drawbaugh.

INVENTOR, DESIGNER

and

SOLICITOR. PATENTS.

☞Also Models Neatly Made To Order.

Eberly's Mills,

Cumberland County, Pennsylvania.

[See Other Side.]

Dan'l Drawbaugh,

INVENTOR

OF

THE FOLLOWING PATENTS.

Stave, Heading & Shingle Cutter.
Barrel Machinery.

STAVE JOINTING MACHINE, Many in use.
Tram & Reel-staff for leveling face of Millstone.
Bine and Driver for running Millstone.
Nail Machinery for Feeding Nail Plates.

PUMPS, ROTARAY & OTHERS.

Hydraulic Ram.

THE DRAWBAUGH Rotary Measuring Faucet. very extensivly used.

CARPET RAG LOOPER—A little devise by which rags are looped quick and firm. without Needle or Thread.

ELLECTRIC CLOCK.

MAGNETO ELECTRIC MACHINE,

For short line Telegraphing. Fire Alarm. and Propelling Electric Clocks. It can be applied to any form of Electric movement. Gives entire satisfaction USEING NO

GALVANIC BATTERY.

☞For SIMPLICITY it has NO RIVAL

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That list does not contain the telephone, and does contain a great many besides the magneto-electric machine, though that is made the most prominent. And yet that witness had the audacity to come upon the stand and swear that he did not know of anything Drawbaugh was working upon except the talking machine and the magneto-electric machine. But this, while perhaps as strong as anything can be against Drawbaugh, is not the strongest thing against this witness and against Drawbaugh. He wrote in 1875 three articles for a county paper, — *The Carlisle Mirror*, dated Nov. 5, Nov. 12 and Nov. 16, 1875, containing news about Eberly's Mills, and again another article, Oct. 27, 1875. Three out of these four articles refer to different members of the Drawbaugh family. The article of Nov. 16, 1875, contains two paragraphs describing the work going on in Drawbaugh's shop; one speaks of the manufacture of the Kline patent axle, and the other is as follows: —

"ELECTRIC CLOCK WITHOUT A BATTERY is being gotten up in our town by Daniel Drawbaugh to exhibit at the Centennial next fourth. It will be one of the things not dreamt of by every one, and be a credit to the nation for its wonderful simple workings and great convenience."

And yet the man that wrote that had the audacity to swear, and the claimant allowed him to, that he did not remember that Drawbaugh was working on anything except the talking machine and a magneto-electric machine.

Again, the deposition of this witness is to the effect that the one thing which, so far as Drawbaugh's inventions were concerned occupied his attention, was the talking machine. He printed a list of Drawbaugh's inventions and did not mention it; he published during that time four articles in the newspaper, one of which was devoted to the work of Drawbaugh and his shop and to a description of the axles and the clock, and not one of the articles spoke of the talking machine. It is absolutely impossible to believe that Drawbaugh could have had there a practical working speaking telephone, that this man for a couple of years could have been experimenting on it, that Drawbaugh could have been earnestly and eagerly desiring to make it known to the community and attract attention to it, making no concealment of it, but showing it to everybody who came along,

and this particular friend and coexperimenter never have mentioned it in his newspaper articles. The defendants have not recalled him, and they have not called Mr. Drawbaugh nor attempted in any way by any evidence to explain the damaging effect of these papers.

The witness proved some other matters about Milltown which are useful in another connection. He said (p. 390): —

"*X Q.* 114. Who kept the store during the three years you lived there?

"*A.* In full there was no store kept during the three years while I was there; Abner G. Wilson had store there for a while, but, having a keg of powder too near the fire, blowed him up, or the goods; some lit, and some did not, some burned up before they lit; it so completely busted the shell of the house in which it was that he left and never returned; after which, perhaps a year, a new shell was prepared to keep store, in which Jeremiah Fry kept some few articles; that is all I recollect of the store business at Eberly's Mills."

It will be observed that this is a statement that, after A. G. Wilson's store was blown up, about a year elapsed before a new one was built, and then Jeremiah Fry occupied it. It appears from Jeremiah Fry's deposition (p. 150) that he began to keep store October, 1875; it appears from Fettrow's deposition (pp. 666–7) that the store exploded about January, 1875; this was still better fixed by the newspaper accounts of it, of Jan. 22 and 29, 1875, copies of which were put in by the witness J. L. Weaver (complts, ii, 1222), and are printed with the complainants' exhibits, Vol. iv., p. 401. The defendants also wished to use this date as a means of aiding one of their witnesses, and defendants' counsel stated on the record that the explosion was on Jan. 19, 1875 (defts, surbtl, 816, int. 6). It is proved, therefore, that from Jan. 19, 1875, to October, 1875, there was no store there. This becomes important in connection with defendants' witness, Updegraff, No. 120, *infra*.

He testified (x-ans 125, p. 391) that he had "some faint recollection of seing C"; knew nothing about H or J.

No. 50. *Robert J. Strong*, p. 392. — He taught the Gorgas school in 1875 and 1876, and testifies that, in the spring of 1876, Mr. Hamacher (q. v. *supra*, p. 83) made a visit to his school

with some of his pupils; they left the schoolroom to go to Mr. Drawbaugh's shop; returned, and told witness that Drawbaugh had told him he had a talking machine there. He said he went there in November, 1875, to have a gun repaired, and thinks that, at that time, he saw some wires or a wire and "an armature magnet" (p. 392); he believed they were parts of a machine called a talking machine; he was specially attracted to them because Drawbaugh mentioned them, but Drawbaugh did not explain to him the principle upon which they operated; nor did Drawbaugh say whose invention they were; he says he has never been to the shop since that month. That is all he knows. He was cross-examined at some length about his report book introduced in evidence to fix the dates, and it turned out to be kept as badly and in as worthless a manner as possible, — names were wrong, and dates entirely wrong. The report shows by the handwriting that it was not made at the date specified. His deposition, so far as it rests on that report, is not worth much, nor does it do any credit to his character for carefulness and accuracy.

No. 51. *Adam Hiler*, p. 398. — Farmer. Says he lived in Milltown in 1869, working as a day laborer; that at that time he planted potatoes one day for Drawbaugh; while he lived there (1869), Drawbaugh told him that he had a talking machine by which he could stand at White Hill and talk to his brother, the squire, at Mechanicsburg, quite handily. As the witness's description shows that the place where he told him this was not at White Hill, and as Squire Drawbaugh did not live at Mechanicsburg at any time, pretty much all of this part of the testimony must be laid aside. That is the only time and only way when he pretends to have had any knowledge about the alleged talking machine.

Upon the question of poverty, he says that in the course of that year he worked planting potatoes in Drawbaugh's garden to the extent of $3.50, and that he had to ask Drawbaugh for the money at least three times, he thinks, and that Drawbaugh did not pay it the first time because he did not have it. Comparing that story with the actual facts in the case as to what Drawbaugh did receive during that year, which includes $1,200 cash from his faucet patent, it is

evident either that the story is entirely false, or that Drawbaugh was not fond of paying his debts even when he had the money.

No. 52. *Henry Bonholtzer*, p. 402. — Age, fifty; blacksmith; from May, 1863, to Sept. 14, 1869, he took out, in connection with Jacob Shopp, two patents relating to reaper knives. In the early part of June in that year he prepared the model for the second patent with the assistance of Mr. Drawbaugh and Mr. Shopp, and he went to Drawbaugh's place at Milltown for that purpose. From June to September he was there half a dozen times, and sent Mr. Shopp twice a week; he adds that they always went both together. Upon one of these visits Drawbaugh was speaking to Mr. Shopp about a talking machine, showing it to him; "I paid small attention to it" (p. 403): —

"*Q.* 14. What did Mr. Drawbaugh say about his talking machines to either of you?

"*A.* He showed him a machine that he was going to invent for speaking through; he spoke something that he was inventing something to speak through wire — a box or telegraph wire at that time; or something or other at that time; then he didn't care about showing it to every one; he showed it to Mr. Shopp; didn't pay much attention to it myself, because he was showing it to Mr. Shopp; I was more interested about my own machine; that was all that was spoke to me there at that time.

"*Q.* 15. Did he say he didn't show it to everybody?

"*A.* Yes, sir; he said he didn't show it to everybody, but he showed it to Mr. Shopp."

P. 403, ans. 17, 18, 19. "During that same fall I went to Lancaster City with Drawbaugh," and on the way home "he said he was working on a machine to talk to people through wire, — on wire in a box of some kind in place of telegraphing"; we were speaking about telegraphs, that is what led to his conversation "Mr. Drawbaugh and I were at Lancaster at that time for the purpose of getting a milling machine up to make our patent bar"; "Drawbaugh was to build it."

No. 53. *Jacob S. Shopp*, p. 405. — Says that he went to Drawbaugh's shop with Bonholtzer to have work done upon a reaper knife, but that the visit was after the second patent was taken out,

and not, as Bonholtzer testified, between the two. During that visit Drawbaugh said he was working on a machine by which he intended to convey the voice; he referred to this just simply to show what he has been working on (p. 406): —

"*Q.* 14. How did he call your attention to it — what did he say at the time?

"*A.* Well, he said he had a thing here which he thought if he could succeed would be a good thing, said he wasn't in the habit, though, of showing it to everybody."

This does not agree with the publicity alleged in the answer and sworn to by most of the defendants' witnesses, and it is a statement which if true does not make out a defence.

Witness says that he saw B and F; did not see any others at that time; that he saw C some time in 1869. Has never been at Drawbaugh's shop since 1874 or 1875; thinks that at the time of the last visit he saw D, E and A; was at Drawbaugh's shop a number of times between 1869 and the last visit referred to. Never heard anybody talk through the machine. The next time he met Mr. Drawbaugh after seeing D and E was, he thinks, in the early part of 1876, in February, at Mechanicsburg (ans. 26, p. 401): —

"*Q.* 27. At that time at Mechanicsburg did you have any conversation with Mr. Drawbaugh about talking machines? If so, what was it?

"*A.* He said 'You ought to come down now and see my arrangements I have got now'; I said I would if I had the time; he said talking machine.

"*Q.* 28. State all of the conversation that you remember.

"*A.* I asked him whether he was going to exhibit at the Centennial. He said, 'I would, provided I can raise funds enough to do it'; he says, 'I haven't got the money to go ahead as I would like'; that about all the particulars."

P. 408. "*Q.* 37. When Mr. Drawbaugh showed you and Mr. Bonholtzer his talking machine in 1869, did he say whether it was operated by electricity, or not?

"*A.* I don't recollect that."

The substance of the testimony of these two witnesses is, that they were men interested in inventions; one of them was frequently at Drawbaugh's shop during the period of five or six years before 1876; a friend of his for twenty years; and he never heard any talk through or witnessed any use of any talking machine. Whatever

value this testimony may have to prove the existence of *any* instruments, — and this rests entirely upon the witness's memory without any direct aid from any papers, — it is inconsistent with the existence of a practical operative instrument to which Drawbaugh was devoting much attention even early in 1876.

No. 54. *Joseph M. Wisler*, p. 410. — Has known Drawbaugh twenty years; built a house in New Cumberland between the fall of 1876 and the spring of 1877; lived in Newmarket from 1866 to 1874; says that while living there he saw at Drawbaugh's shop a talking machine; B was the first one; did not hear anybody talk through it at that time; says that Drawbaugh merely explained the idea and his intentions, and what he expected to do with it; "he said the idea was to talk to a distance." Was in Drawbaugh's shop in the spring of 1875. Drawbaugh said, "here is something I want to show you"; he said he had just finished them; and showed D and E; "I saw A before I saw D and E, but I don't know how long, may have been a year." From September, 1876, to 1880, "it is probable I was there, — I used to visit there a good bit; was at Drawbaugh's shop in September, 1876, to get the pipe of a pump fixed; did not see any talking machine at that time. Has not seen any of these instruments since the time he was there at the shop as stated.

This is the case of a witness who merely relies on his unaided memory for the dates of instruments which never made sufficient impression on him for him to care to talk through them, although he was at the shop frequently.

No. 55. *H. F. Drawbaugh*, p. 414. — Age, fifty-one; brother of Daniel Drawbaugh; superintendent of a lumber mill. In 1872 he went to Perry County, got up a distillery, run it, and then in 1873 moved back to Newville, and has been there ever since. The last of July or the first of August, 1872, was at his brother Daniel's two weeks, waiting and helping him to make an apple cylinder and hoisting rigging for the witness's distillery; fixes the date of the cylinder and rigging by his books, which he produces; says that he then saw F and B, and *that is the first time that he ever saw a talking machine.* His testimony contains the following (p. 415): —

"*Q.* 9. When you were there at your brother's shop in July or August, 1872, did he show you any talking machines?

"*Ans.* He did.

"*Q.* 10. Please look at the machines now shown you, marked 'B' and 'F,' and state whether you ever saw them before; and if so, *when and where you first saw them.*

"*Ans.* I seen them at my brother's shop at the time we was making that cylinder and hoist rigging, in 1872.

"*Q.* 11. What was he doing with them at that time?

"*Ans.* He was working at them and experimenting.

"*Q.* 12. Do you recollect why it took two weeks for you to get your work done there at the shop at that time, if so, state?

"*Ans.* He was turning up some walnut machinery for his talking machine, different from these (F and B), and I could not keep him at my work.

"*Q.* 13. Did he and you talk through the talking machines at that time?

"*Ans.* Yes, sir.

"*Q.* 14. Could you hear and understand what he said to you through the machines at that time?

"*Ans.* Yes, sir.

"*Q.* 15. Do you recollect any words that were spoken through the talking machines (B and F) at that time, — that you heard by means of them?

"*Ans.* Yes, sir; 'Harrisburg is the capital of the State, situated on the banks of the Susquehanna River.'"

As B and F are the earliest machines alleged, and it is not suggested that this witness ever saw anything except those and the wooden ones, which are stated to be much later in date, it is perfectly certain that, according to his own testimony, *he never saw any talking machine before* 1872, *and there is nowhere any suggestion in his deposition that he had ever heard of them before that.*

He then states his own occupations. He ran a private line of freight cars of his own, — market cars, — from Newville to New York, Philadelphia and Baltimore, from May, 1876, till the summer of 1878. His son, Charles, and part of the time his nephew, Harmon K. Drawbaugh, generally known as "Shorty," helped him with the cars. His father lived with him from 1874 to 1878, and died Dec. 8, 1878, very old and feeble. From July, 1872, to May, 1876, says that he was at Daniel's quite often. "Every time I was down he was working at the talking machine, more or less, experimenting" (ans. 30, p. 417). While running the freight cars from May,

1876, to the summer of 1878, his train laid over twenty two hours at Bridgeport, about two miles from Drawbaugh's, and he was in the habit of going there (ans. 32, 33, p. 417). During this time, "as a general thing, he was working or experimenting on the talking machine, the clock and the motor, all three of them; he always explained them to me and showed me the improvements he was making" (ans. 35, p. 417). While the clock company was operating at Drawbaugh's shop he was there "very frequently" (ans. 38, p. 418); it began to operate in 1878 and actively continued until about the beginning of 1879. Once "Daniel and Grissinger went to Philadelphia to get some material for the clock company, and Daniel wanted to get some materials for his talking machine at the same time." Every time witness would be at the shop while the clock company were there, Daniel "would be working on the talking machines, generally at night when no one was there but myself." "When he was working at them in the daytime and anybody would come in, he would shove them away quick" (p. 418). This does not agree with the repeated allegations of publicity.

The witness says, that "every time he was down there," from the summer of 1872 down to 1880, Daniel was "working on the talking machine and talking, and wanted me to go in with him and furnish means" (ans. 41, p. 418). The witness says his brother *first* asked him this in 1872, and then continually down to 1879, wanting him "to lend money to buy materials and things for it." The witness would not do that, but "lent him money for his family, as he was very poor"; did not go in with him on the talking machine because he "was fearful there was no money in it." "Brother John said, 'don't encourage him or he will go crazy: he is half crazy now with studying'" (ans. 45, p. 419).

"*Q.* 46. Did you ever hear your brother Daniel's wife talk about his spending his time experimenting; if so, how often, and during what years?

"*Ans.* I have heard her make mention of it very often *during the year* 1876, *and from that up, not from that back;* she said she wanted him to stop his fooling and go off, — he had good offers to superintend for other firms, — and then they would try and live better: they had been living so poor for many years on account of his experimenting."

Witness says that his brother's experiments on the talking machine and the clock exposed him to much ridicule. He said that the people were ignorant, and that Daniel was very sensitive about it, and he would hide his inventions, except from those who would not laugh at him; "and if any one said, 'O Dan, that is a humbug!' that man would never see the thing again" (p. 420). The defendants, in other parts of their proofs, have taken a good deal of pains to prove what the newspaper accounts of him show to be an undoubted fact, that the clock did not expose him to ridicule at all, but attracted great attention and admiration, — far above its deserts, for it was a mere modification in details of construction of an apparatus which at all times had been found worthless, and was so in his hands.

The witness goes pretty strongly into an endeavor to support the allegation of poverty, and says (p. 420): —

"*Q.* 51. What was your brother's financial condition from 1872 down to 1880?

"*Ans.* He was poor. The greater part of the time his family was in need of money to buy household provisions; he had a large family; part of the time he would have a little money, and part of the time he was hard up; he would get some some day and use it up for his family, and then he would be always experimenting and not getting any in; at one time he sold a part interest in the clock and got in some money, but it did not reach to square his debts; it took it all to square up, so that they were just as poor as ever."

P. 421. "*Q.* 56. You have stated that your brother Daniel endeavored for a good many years to get you to go into the talking machine with him: do you know whether he tried to get others to go in with him besides you?

"*Ans.* He told me that he had asked a great many to go in with him. I was not with him when he asked them, but he got me to see others for him, and I have seen different parties for him."

P. 422. "*Q.* 63. Was Daniel in the habit of showing his talking machine much to his brother John; and if not, why not?

"*Ans.* He did not show it much to John, because John was always jawing him for working at something like that, and for not working at something that would pay him regular wages. He said he needed it for his family, and here he was working and always experimenting at something that did not pay him, or something like that; that he would go crazy with it after a while; and Dan did not like to show it to him."

"*Q.* 65. Why was he willing to show it to you more than to John?

"*Ans.* There were two reasons for that. One was that he wanted me to furnish the money; the other reason is, that I would not discourage him, but would assist him when no one was there to experiment on it, and say nothing about it to any one."

P. 422. "*Ans.* 67. Nearly every time I came to the shop from that [1872] up he had some of his machines there. I saw he was experimenting. I often stayed there in the evenings with him or with my brother John.

"After supper in the evening he would generally say 'Now, Harry, come along down to the shop: I want to experiment.' We would go down to the shop and lock the shop, and we would often stay there till midnight; then he would adjust it and attach it to the wires, and then he would have me running down into the cellar back and forth, listening and talking into it, until I got that tired that I thought I could not stand it, but I didn't want to discourage him. He had a large draughting board in the shop on trestles, and I would lie down on that and take a nap, and when he wanted me he would wake me up."

The witness then states that he saw C and I before he saw A, and saw C and I and A and D before May, 1876. "E, G, K, L, M, N, O all look about alike"; saw him working on H; don't remember J; "helped him to operate them while running the cars and later"; cannot remember the order in which they came along; remember another machine, "which I do not see here," "like a large shoe-blacking box, it had a drop of solder inside, and a point on a spring, and some fixings inside; that was in 1872." "Never saw anybody talking through the machines except Daniel and myself; he never would do anything with them while anybody else was in the shop while I was there, except that his little boy would be there sometimes" (ans. 72, p. 424). His impression is that he saw H the first year that he was running the cars. Daniel experimented a good deal with H; saw A "shortly after I got the apple arrangement; it may have been the next summer" (ans. 75, p. 425). The apple arrangement was in the summer of 1872. It is not even alleged by Drawbaugh that A existed before the summer of 1874. Saw C and I shortly after the summer of 1872. Witness states his impression to be that he saw D before starting the cars; could not tell what year.

When experimenting with my brother "we talked and listened in the same instrument." "We would talk into it and then put it to the ear to receive the answer. I think we used B and F the same way, but I won't be positive about it, because it is so long ago" (ans. 80,

[Insert between pp. 514–515 of brief, and pp. 116–117 of "Abstract of Proofs."]

Proof from Henry F. Drawbaugh, supported by Daniel Drawbaugh, that the tumbler transmitter F was not made until after the Bell patent.

Throughout the testimony for the *complainants*, there is no trace to be found of the existence of the *tumbler transmitter* **F** before late in 1877, or the spring and summer of 1878. The Bell invention, as first published in the newspapers, was stated to consist of two tin cans, across which were stretched membranes carrying armatures in front of electro-magnets. One was employed as a magneto transmitter, the other as a magneto receiver. This was in the *Scientific American*, of September 9, 1876, which Drawbaugh at that time was in the habit of reading (pp. 202, 204, *supra*). Our witnesses saw one tin can of this sort, **B**, at Drawbaugh's shop, in the fall of 1876, after those publications (p. 499, *supra*). None of our witnesses saw the tumbler.

In May, 1877, and again in July and August, 1877, Edison's description of his carbon-powder speaking telephone was published in the Philadelphia and New York newspapers (complts, iv, exhibits, 433, 437, 439, 440). The material employed in these was stated to be plumbago. Drawbaugh testifies that he used plumbago in an instrument called the cup instrument, alleged to have immediately preceded the tumbler and to have been of the same character; that he used it in his earlier experiments with the tumbler instrument, but discarded it in favor of ordinary carbon—at first charcoal, afterwards coke — both of which are soft carbons, and finally hard gas carbon, so called, obtained from a deposit in gas retorts, an extremely hard substance now universally used in microphones. All these he used *finely pulverized* in the tumbler. He testifies that in the instruments subsequent to tumbler **F** he used *solid* blocks of carbons only—at first coke, but found that bad because it was too soft and wore out, and after that invariably used the hard gas carbon. His testimony is exactly as follows:

Defts, ii, 789, he says that for the cup instrument he used clean, fine earth, dampened; then mixed plumbago with it; then plumbago alone; then fine or pulverized charcoal; and sometimes "finely divided metals" which he afterwards described as fine bronze powders.

Again (*ib.* 1033), he says that in this instrument he found carbon the best, and that when he used plumbago he got it in lumps and pulverized it; but charcoal was the best.

He says (*ib.* 801) of the material used in the tumbler **F**: "I had used plumbago alone, and I had used plumbago mixed with other materials — that is, with carbon and pulverized charcoal and plumbago; and at times I had used charcoal alone; at other times finely divided coke and charcoal mixed; and also pulverized coke alone. I had used bronze — that is, finely divided metals — mixed with carbon or coke, and various other materials that I cannot think of."

"Q. 133. In this tumbler instrument, was the low conductor used in the form of a powder, or of a solid cake, or how?

"A. As a powder."

Being cross-examined on these answers, he testifies (*ib.* 1035):

"*Cross-Int.* What was the result of your trials with the instrument **F**, and the various materials named, as to what was the best one or what was the best condition in which to use it?

"*Ans.* As near as I can remember, the coke and carbon out of gas retorts — hard carbon; I think they were the best in the tumbler instrument. But I had some good results from the combinations of the different ones — I mean the different combinations of coke and charcoal. I never used it solid in that instrument — finely divided."

These are all the statements he makes as to the use of *plumbago* anywhere, in any instrument. It is plain, therefore, that some of his earliest experiments with the tumbler instrument led him to discard plumbago, substantially, if not entirely, even in that instrument, as a bad material.

He then describes the material which he used in his later microphone instruments, alleged to be made in the following order: **G, O, H.** In the first place, the structure of these instruments and the drawings of them, with the parts restored under his direction, show that they necessarily used hard carbons of a lenticular shape. His only testimony about them is explicitly that what he used in them was solid carbons, at first made of coke, but they were found too soft and wore away; and after that invariably of hard gas carbon. The description about that is found in the description of **G** (pp. 839–40), where he speaks of the material as a "carbon block or ball." That had already been defined by his previous description of the instrument **H**, the Blake transmitter (*ib.* 828, 831–2). On page 828, he refers to the electrode in **H** as "a carbon block or ball," "or

several blocks." Then he was asked on direct examination about **H** (p. 831):

"*Int.* 283. What kind of carbons did you use in the instrument?

"*Ans.* I generally used carbon that I got out of the bottom of gas retorts, where the carbon accumulates; I got it at Harrisburg; just lying in the yard — just picked it up; I also used others, cut out of coke, but found that had a tendency to wear away, being too soft; I also made carbons out of charcoal, myself, which to the best of my recollection I used; I pulverized charcoal and made it into a thick paste and compressed it; then covered it with a mortar of clay, and heated it in the fire to a white heat; these carbons varied in hardness.

"*Int.* 284. What kind of carbon did you first use on this instrument '**H**'?

"*Ans.* To the best of my recollection, the softer carbons, made of coke.

"*Int.* 285. Did you find these softer coke carbons wear out?

"*Ans.* I can't just say that they wore out; they wore off. I can't just say I discarded them for that reason. I found the harder carbons answered a better purpose."

It is absolutely certain, therefore, that he did not use plumbago in **H** or **G** or **O**, and that he did use it in his earlier experiments with the cup and tumbler, but not afterwards. He *began* on the *microphones* with coke, in favor of which he had previously, in the tumbler, discarded plumbago.

Henry Drawbaugh, in the passages referred to and stated in the appendix, p. 117, to wit, defts, i, 432, testified on this subject. He says that at one time Daniel asked him to get him some plumbago at Philadelphia; that he did not do it, and soon afterwards he found Daniel working with some plumbago for one of his talking machines. That statement is Daniel's statement as well as Henry's; because after Henry had completed his long deposition (p. 431) Daniel had him recalled on the afternoon of the same day for the purpose of making this statement.

Henry wishes to have it understood that this plumbago was used in the Blake transmitter, **H**. It is absolutely certain from the structure of the instrument, and from the testimony of Daniel already quoted, given six months after Henry testified, that plumbago never was used in **H**. *The time when Henry was asked to get plumbago for the talking machine, therefore, was the time of the*

earlier experiments with the first cup or tumbler transmitter. Now when was it?

Henry's testimony is that he was running a line of market cars from Cumberland Valley to Philadelphia and New York; and that it was while he was doing this that Daniel asked him to get plumbago in Philadelphia. He says (defts, ii, 416) "I started running in May, 1876, and run until some time in the summer of 1878."

The earlier experiments with the tumbler transmitter, therefore, were more than two months, and less than two years and a half, after the Bell patent. It is impossible for the defendants to escape this conclusion.

Another circumstance proves that this plumbago purchase was in the earliest time of the instrument in which it was used. Henry Drawburgh swears (*loc. cit.*) that when Daniel asked him to get the plumbago on his trip to Philadelphia he did not get it. He testifies (defts, i, 432) "On my return, I found him working with some in his shop, and I suppose he got it at Harrisburg." Plainly, this haste was not six or eight years after he had discarded plumbago as worthless. *It betokens the eagerness of a man who had been copying the magneto telephone and had just read in some paper that plumbago could be used in a telephone and wanted to try it right off.*

Henry, indeed, undertakes to fix the time a little more definitely. He says that this request to buy plumbago was made while Daniel was living at Mechanicsburg, which was from April, 1876, to April, 1877. But that is an assertion of not the slightest value for fixing the date. It appears that during the whole of his two years of running those cars, his cars laid over on each trip once a week, for twenty-two hours, at a station a mile or two from Eberly's Mills, where lived his brothers Daniel and John, and their father, and Henry says that during nearly every week at that time he was in the habit of going over to Eberly's Mills, and being at his brother's shop (defts, ii, 417). The attempt to place this alleged use of plumbago during any particular part of those two years from May, 1876, to the summer of 1878, is therefore entirely unreliable.

This testimony not only puts the date of the earlier experiments later than the Bell patent as a fact of itself, but it is perfectly destructive of the allegation that the tumbler F had been discarded years before, and that the Blake transmitter H was then in existence; and of course it agrees perfectly with all of Drawbaugh's history and the publications and other facts which surround it.

p. 426). According to Drawbaugh's description of F it was a transmitter. Sound could not have been transmitted from B to F.

He first stated his impression to be that they used I and C together, but he substantially takes that back. "I can't tell how we used them, — which way, or whether we used these two together" (ans. 83, p. 426). In experimenting, Daniel was taking the instruments apart and fixing them, "and sometimes he would say, 'Do you hear it plainer now,' and sometimes I would hear it plainer and sometimes I would hear no sound at all" (p. 427). Talked with him about going into the clock, and also into the faucet, in 1876 and 1877, and made some plans for going in on the faucet in 1878; afterwards Chellis went in with him. In the summer before Shettel and Grissinger went in he asked witness to go in on the clock. "I guess it was in 1875 or 1876." In fact they went in in 1878.

Thinks that D had a bottom on it when he saw it (p. 428). From 1865 up to 1872 was at his brother's shop "occasionally, not much." Says that Daniel told him once that Edison had a telephone, and if the witness had helped him Edison would not have got his invention (x-ans. 102, p. 428); was more willing to go in on the clock and the faucet than the telephone. Says that he once spoke to an operator about the talking machine, and was told "it would not do, because telegraphing was private, and anybody could take off the sound if a talking machine was used." The witness states that Daniel proposed to him that he would prepare the specifications, drawings and models, and that the witness should pay the cost of getting the patent on the clock and start the manufacture, and that they should be jointly interested. The witness says that Daniel wanted him once to get some plumbago, which, he understood, was for H; that was while he was running the cars and before the witness heard anything about Edison; says it was while Daniel lived at Mechanicsburg. Daniel's express testimony is that he used plumbago in F, but only gas, carbon and coke in H (defts, ii, 790, 831, 832).

This witness is the most energetic of the Drawbaugh family, and evidently a driving person; a man of such means that he ran a line of his own market cars for two years to Philadelphia, Baltimore and New York, from a place up the Cumberland Valley beyond Harrisburg. According to his story, *he never knew anything of his brother's alleged talking machine until* 1872, and the instruments that he thinks

he saw there were B and F; he professes to have repeatedly assisted his brother in his experiments; and he is one of the very few persons who ever pretend to have experimented with him. But the impression which all these experiments left upon him was such that he was not willing to put a cent in the enterprise, and it was pretty evident, whatever he may have pretended to do, he never *seriously* urged any one else to. He was ready enough to lend his brother money for the support of his family, but, although the claimant professes to believe that he had reached the point of practical utility, and that a fortune was awaiting him if he could only get a patent, this well-to-do brother, who to-day avers his belief in the story, never was willing to advance fifty dollars to bring a fortune into the family.

This deposition of the claimant's own brother is inconsistent with the assertion of the claimant and his less well-informed witnesses that he had a practical operative speaking telephone in 1867, and that, (from that time on, it was the thing which chiefly occupied his thoughts and attention; for his brother certainly never saw it, and does not appear even to have known of it until 1872.

The defendants evidently felt how fatal this part of Henry's deposition was to them, for, on the surrebuttal, although the complainants in reply made no special attack upon Henry's deposition, feeling that the general facts of the case were enough to answer it, the defendants, not daring to recall Henry, and well aware that they could not get him to swear his date back earlier and be believed, called a considerable number of witnesses to testify *that they heard Henry say in* 1868 *and* 1869 *that his brother Daniel had a talking machine, and that he, Henry, had himself talked through it in* 1868–9. Of course such testimony, which is mere gossip at third hand, is incompetent, and perfectly worthless when the person himself, the claimant's own brother, employed by the defendants as their agent to look up these very witnesses and prepare their case, has testified positively that he never saw it, and does not pretend that he had heard of it before 1872; and they did not dare to put him on the stand to swear to anything earlier. See for this matter defendants' witnesses, J. A. Graham, J. Murphy, Jr., G. S. Bricker, J. M. Spafford, A. H. McHenry, J. H. Dougherty, S. A. North, W. North, in defendants' surrebuttal.

No. 56. *Peter C. Zimmerman*, p. 432. — Age, fifty-six; resides in Shiremanstown, which is two miles from Drawbaugh's shop, and has known Drawbaugh all his life. Says that he was at Drawbaugh's shop in February or March, 1871; that he saw F and B; heard nobody talk through them; Drawbaugh told him, however, that he had talked and could be understood, that it worked by electricity, "would be much easier and better than the telegraph, and would supersede it." Says that within a month or two he told people at Shiremanstown that he had seen the machine and what he could do with it, and the consequence of his expressing his belief in it was that people said he was crazy. This was one of those pieces of testimony put in upon a certain view or theory of the case which the defendants afterwards thought it wise to entirely contradict. According to this witness, people thought he was crazy merely because he spoke of Drawbaugh's machine and expressed his belief in it in 1871. According to the surrebuttal testimony, Drawbaugh's talking machine was known and common talk all over the county twenty miles away from his shop in 1868 and 1869, and everybody believed it was or would be successful. The Court can hardly believe, or believe that the defendants believe, both of these stories. On redirect examination the witness said (ans. 43, p. 437):

"*Ans.* 43. I have spoke to Mr. Drawbaugh about it, yes, sir, several times, talking about the machine, and about the idea of vibration, and a certain remark he made to me in conversation; the remark was this: that he heard Mr. Samuel Hertzler's daughter play on the organ probably a quarter of a mile from his place of residence; while she was playing the organ, he took notice that there was a sound of a cut off in that organ just like a tap, tap, tap, a cut off in that sound; being anxious to know what caused it, he went to Samuel Hertzler's, and found a break in the window-glass; being loose, it would jar; from that he seen what the cause was of that there sound cutting off like; then he said that that showed him that he was right; that give him an idea that he was right in his study."

We afterwards ascertained and proved in rebuttal by the organ dealer Raffensburger (complts, ii, 1252) and by A. L. Rupp and H. S. Rupp (*ib.* 1117 and 1142) that Hertzler bought his first organ in the summer of 1875. The invention was after that.

No. 57. *William H. Bates*, p. 438. — Age, forty-eight; Mount

Joy, Lancaster County; blacksmith; has known Drawbaugh for thirty-five years. Says that he was at Drawbaugh's shop in the summer of 1874; passed there in the fall of 1877, and between these two dates was there eight or ten times; alleges that he first saw talking machines at Drawbaugh's in 1874; during these three years saw B, F, C, A, D, E, F, H; first saw A, D and E in August, 1875. He did not pretend to any means for fixing the date, but said that he was at the shop a number of times up to the fall of 1877 (ans. 4–7). He referred to getting a pair of small axles turned; but there is no connection between axles and a talking machine, and he had axles turned at various times during the three years after the fall of 1874 (x-ans. 62); thinks he first saw H in the summer of 1876.

P. 440. "*X* 23. . . [Drawbaugh] said he would like to get it patented, but he had not the means to do it; he said he could make a fortune out of it.

"*X* 24. And did he tell you this a number of times?

"*A*. Yes, sir; we were very intimate friends, and I went to see him pretty often, and we exchanged opinions about mechanism."

About another of the instruments he testified: —

"*Ans.* 29. [Drawbaugh] told me it would take the place of telegraphing, and remarked that if he had money enough to get it patented he would be well fixed."

P. 441. "*A. 33.* I think the first time we ever spoke together about the talking machine he wished he had money enough to take out a caveat for a patent. . . . When he showed me the machines A, D and E, he said he thought he had the talking machine perfected."

Says that when he saw F it was in the same condition as now; B and C were not. On cross-examination (x 60, p. 444) it was ascertained that in the fall of 1868 he worked for the Faucet Company and for four months after that he made tools for them partly at the blacksmith shop, about an eighth of a mile from Drawbaugh's shop (that is to say, Fettrow's shop, twenty feet from Drawbaugh's house), and would sometimes be at the shop twice a day on that work.

The substance of what is proved in favor of the *complainants* by this witness's testimony is that in the winter of 1868 and 1869 he lived at Milltown and worked for the Faucet Company partly in

Fettrow's blacksmith shop and partly in Drawbaugh's shop itself, and that he never saw any talking machine at the shop there all that time; that after he saw them, six years later, if he ever did see them there, and if that was the time, he and Drawbaugh were quite intimate, conversed a good deal about them, but somehow or other, and for some reason, Drawbaugh never offered to talk through them to him. Now when a witness is so circumstanced, and presents as proved facts these *facts* which are inconsistent with the claimant's story or with any case which can be valid in his behalf, any pretended recollections of the present day in favor of his friend from such a witness with such a history may injure his credit, but afford no basis upon which the Court can rest.

No. 58. *Daniel Rupp*, p. 446. — He is another witness, somewhat similarly situated. It turned out, not upon his direct examination but upon his cross-examination, that he was interested in a patent mill-bush, which was afterwards proved by the testimony of Drawbaugh on cross-examination, and by the testimony of W. Sadler, one of the Mill Bush Company, to have been the invention of a neighbor, Teahl, and to have been manufactured at Drawbaugh's shop, under Drawbaugh's personal care, and with special machinery got up for the purpose by Drawbaugh in the year 1868. Rupp was the managing agent of the Mill-Bush Company. He says that he also used to go to the shop on account of faucets which he bought and used in his business, and that he had the oversight of seeing after the mill-bushes. (See Mill-Bush Co. in the body of this brief.)

He has known Drawbaugh for thirty years, and for a great many years past has lived about three miles from Drawbaugh's shop, and yet he testified (p. 446): —

"*Q.* 5. When was the first time that he showed you his talking machines?

"*A.* In 1874; June or July."

He has been at his shop more or less since, and seen them. He says that the first one was "round and made out of walnut"; "he showed me a number of the same kind of concerns that he had in a case, different sizes of them"; he saw F, A and C; thinks he saw a mouthpiece something like O, and saw something like D, with a

curled iron on it; he saw all these at the visits in 1874 (ans. 15). According to the schedule of the defendants, neither O nor anything like it, nor even D, nor "a number of the same kind of concerns of different sizes" existed in the year 1874. See the special examination about D and E in the brief, *supra*. Says that at a later time, the latter part of 1874 or in 1875, he heard talk through the machine, and Drawbaugh told him "it would take the place of telegraphing" (ans. 34, p. 449). On cross-examination he says that the instrument Drawbaugh used in talking to him was "some of these (taking up F in his hand), was what he was showing me and what he used" (x-ans. 76, p. 454). Says that during the time of the Faucet Company they had at one time eight men. He then, referring to his visits of 1874, testifies (p. 453): —

"*X Q.* 64. What else did he say about them [talking machines]?

"*Ans.* I urged him to get it patented; he said that he had not it completed yet, or in shape to get patented; that he wanted to make some improvements on it.

"*X Q.* 65. Did you ever after that say anything to him about getting it patented, or about his getting it in shape to get it patented?

"*Ans.* I think I did.

"*X Q.* 66. When was that, and what did you say to him?

"*Ans.* I can't tell the year when it was, but I urged him still to get it patented, and his plea was poverty afterwards."

The witness says that he thought of taking an interest in the clock, because he thought it would not take so much money to go into the clock business as to go into the talking machine; he thinks that he had this idea in his head about 1878 or 1879, or perhaps earlier. It must have been before April, 1878, because Drawbaugh had got partners at that time.

Considering that the talking machines which Mr. Drawbaugh alleges that he possessed in 1877 were little things, which would have cost $4 or $5 at the outside to make, probably not more than $2, and that the clocks which he had at that time were six or seven feet high, costing, even in cheap cases, $25 to $40, and in the cases in which he had them, worth, if they were worth anything, $125 to $150, this assertion of the witness is simply ludicrous. The statement is either pure fiction, or else the witness knew that Drawbaugh had not even then got a telephone fit for use. The witness then says

that he first saw a telephone in practical use in Philadelphia, in the office of a Mr. Middleton, and that when he heard of it he asked them if that was the Drawbaugh machine, and then they got talking about this Drawbaugh machine. That is a somewhat persuasive piece of evidence, put in rather carefully by this witness, and if it be worth putting in at all, it is worth proving thoroughly; if there were a word of truth in it, it cannot be doubted that the defendants, among the four hundred witnesses whom they have called, would have called the alleged Mr. Middleton, or some of the persons in his office. The defendants are undertaking to prove a case, and the failure to call a witness, who, if their statements are true, would necessarily be an important one, must be taken as an admission that he could not testify favorably for them.

The witness testified that Drawbaugh talked through the machine to him in 1874; that at that time, according to his recollection, there was a machine with a bell on to which some wires were attached, but he does not remember whether it was the first time that he was in there, or the second time; both visits, however, were in 1874; he does not know whether H is the instrument or not; it was something like H. This is a pretty important piece of testimony, because it is another proof either that the visit was at least as late as 1877 or that there was at Drawbaugh's shop an electrical bell, undoubtedly the one which he got up to use as an alarm at hotels, or for other purposes, which so much resembles H that this witness is a little in doubt whether it is H or not. It was not H if the visit was in 1874, for it is not alleged that H existed until several years after that time. It will be found from time to time, in the course of the testimony, that quite a number of witnesses pretend to identify H, but do it chiefly by the bell on it, though it is conclusively clear in some cases, and quite plain in others, that they have mistaken the electrical bell machine for H, No. 28, their attention being attracted merely by the bell, *e. g.* Shettel, p. 218, Rupp, p. 454, W. S. Dellinger, p. 470, Updegraff, No. 120, p. 1127.

No. 59. *William S. Dellinger*, p. 459. — This witness is of no importance to the defendants, because he never knew Drawbaugh until after the date of the Bell patent. He says that in March, 1876,

he moved to Milltown to run the grist mill. Soon afterwards he went to Drawbaugh's shop and saw a talking machine, and while he lived at Milltown, several years after that, up to April, 1881, — six months after the suit began, — he saw talking machines there perhaps a dozen times, talked through it, and heard others talk through it; thinks that in March, 1876, he saw E, afterwards B, afterwards A, afterwards C. His testimony about H is very instructive (p. 460): —

"*Q.* 16. Please look at this machine H, and state whether you ever saw it at Drawbaugh's shop.

"*A.* The one that I saw I thought that it was square; it was not sloped off, but had a bell on it; it looked like this inside."

The defendants in examining him tried to put into their questions that the machine which he had in mind was H, but that was not his testimony.

"*Q.* 18. About how long ago was it that you first saw the machine like H, to the best of your recollection?

"*A.* About two years or a little better." [That would be 1879.]

Says he used to be at the shop at night, and saw Drawbaugh working there; does not remember J (ans. 38, p. 462); saw some machine fastened to a cupboard door; says that during the years when he was at Drawbaugh's shop, from 1876 on, Drawbaugh would be generally working on clocks and telephones (p. 463): —

"*Q.* 45. During all the years that you lived there at Eberly's Mills, what invention was Mr. Drawbaugh spending most of his time and labor upon, so far as you have opportunity for observation?

"*A.* The most was on the telephone; his whole heart and desire was on the telephone.

"*Q.* 46. Did you talk with him about it a good deal during those years?

"*A.* Yes, sir.

"*Q.* 47. Did he ever say anything about patenting it, if so, when did you first hear him speak of that?

"*A.* Not to my recollection."

P. 46. "*X Q.* 60. I noticed that you used the word 'telephone' in speaking of what Drawbaugh did: did you and Mr. Drawbaugh use that word during the years you were there while talking about his instruments?

"*A.* In the beginning we used the word 'talking machine,' afterwards 'telephone.'"

Says upon cross-examination (p. 468) that the instrument with the bell was fastened to the outside door of the closet, so that everybody who went into the room would see it. In cross-examination, however, his frequent if not habitual answer, not merely upon matters of detail but in matters of substance, was that he did not remember. Says that he fixes the date of seeing G and O by the presence of his brothers Henry and Michael, who visited him when down at the shop. They were called and testified, but their recollection of what they saw and the particular instruments that they saw does not agree with his.

Dellinger's proof about A, D and E. The first instrument produced which can pretend to be more than a mere rude experimenter's model is A, and the next pair is D and E. It is essential that the defendants should prove the existence of these, by which we mean these substantially as they exist, before Mr. Bell's invention.

It will be remembered how conclusive is the testimony of the defendants' witness Springer to prove that all three of these were made after April, 1876 (v. p. 59, *supra*). The evidence of W. S. Dellinger is hardly less strong. He testifies that he saw E in March, 1876; but that rests upon a mere unaided memory. He then states some *facts*, which he is not likely to be mistaken about. He saw Drawbaugh working on filing and fitting *the peculiar magnets of D*, called by every witness in the case the "curled magnets." He saw him making the *brass bracket* of A. Now Drawbaugh expressly testifies that neither D nor A were changed at all (except cutting a recess in the woodwork of D) after they were first made. Drawbaugh testifies (defts, ii, 1107): —

"*Q.* 1699. You have testified in cross-examination that you made a number of changes of magnets in some of your telephones: state whether or not you ever changed the electro magnets on instrument A, after its construction.

"*Ans.* No, sir; to the best of my recollection, I did not.

Q. 1700. State whether or not you ever changed the magnets or electro magnets on the small magneto instruments D and E, after their construction.

"*Ans.* No, sir; I did not; I know I did not on them; I am positive I did not. I had made some little changes in diaphragms — sometimes thicker, and sometimes thinner diaphragms; and I had made the interior larger — turned out a recess in one of the instruments; that is all the change I can remember of.

"*Q.* 1701. State whether or not you ever made any change in instrument A after the formation of the axle company.

"*Ans.* I think not; to the best of my recollection, I did not."

Dellinger, who never saw Drawbaugh until March, 1876, testifies: —

P. 471. "*X Q.* 136. What instruments did you see him work on?

"*A.* I seen him work on woodwork, and *on these curled magnets* (*taking up D*), also on these wires; he had a machine that he was working on that was putting thread or something on the wires; I don't know what it was.

"*X Q.* 137. When was it that you saw him working on the curled magnets?

"*A.* That I am not able to say.

"*X Q.* 138. Can't you tell whether it was during the first year, 1876, or some of the later years?

"*A.* I don't remember.

"*X Q.* 139. Do you remember what he was doing on the curled magnets?

"*A.* He was working on them with a file, if I mistake not: he had a tool anyhow that he was working with.

"*X Q.* 140. Did you see what he did with them after he had done working on them?

"*A.* He fitted them into the wooden boxes, here on this pivot (illustrating with machine E)."

This is a clear description of the *making* of an instrument and of putting the parts together for the first time. There is no other instrument which contains such parts as he specifies. He continues: —

"*X Q.* 141. You say you saw him work on woodwork; what woodwork do you refer to?

"*A.* I mean the woodwork on these telephones. I would not say it was on these; I know it was not on this one (E), for this was the first one that I saw, when I came in 1876, and it was already made when I came there."

P. 472. "*X Q.* 142. Do you remember his doing anything else on either of the instruments D and E, except working on the curled magnets?

"[*Objected to as assuming that the witness has testified that Mr. Drawbaugh was working on the curled magnets of D and E, whereas his testimony was only that he was working on curled magnets.*]

"*A.* I don't remember.

P. 474. "*X Q.* 160. Do you remember when it was that you saw him at work on the curled magnets?

"*A.* I don't remember.

"*X Q.* 161. You could not say whether it was in 1876, or in some following year, could you?

"*A.* I could not say what year it was in, — that is between 1876 and 1881.

"*X Q.* 151. Did you see Mr. Drawbaugh at any time doing anything on any instruments except working on the woodwork and on the curled magnets and wires?

"*A.* Yes, sir.

"*X Q.* 152. What did you see him doing?

"*A.* I seen him work on these kind of screws and brass pieces like that (*indicating the milled screw and the brass bracket on the back of instrument A*). I could not say that this is the one that I saw him working at.

"*X Q.* 153. Do you remember what he was doing on the brass bracket?

"*A.* He was polishing it off with a little machine that had a leather pulley on. He used something to put on his leather pulley to polish it bright.

"*X Q.* 154. What did he do with the piece after he had got it polished?

"*A.* I left the shop; *afterwards* when I came down he had it attached to a machine like the machine A, to the best of my knowledge.

"*X Q.* 155. Did you ever see more than one machine at Drawbaugh's shop like machine A?

"*A.* I don't remember that I did.

"*X Q.* 162. Could you give us any idea of when it was that you saw him at work on a brass bracket like that on instrument A?

"*A.* I could not say exactly. I could not give no time how long."

No instrument except this single one, A, ever had a brass bracket.

No. 60. *Hieronymus Geistweit*, p. 477. — Says that in 1870 he was millwrighting for H. R. Musser at New Cumberland, about three miles from Drawbaugh's shop, beginning in July, 1870. After the saws had been put up in Mr. Musser's sawmill he ran one of the saws for a year; worked at the sawmill from the middle of 1870 to the end of 1871, then went to the steam mill and ran the engine of Lee & Bayler till 1876. He says that in July, 1870, he went to Drawbaugh's shop to borrow a ratchet drill; that Drawbaugh showed him B and F, F being in an office room inside and B in another part of the building. Then he shows his disposition to accept as undoubted fact the story which he has been filled with, and without any pretence of knowledge he says: "He had

had it up for some time then, but of course every day he was putting something to it, and wanted to find out how far he could talk with it, told me he thought he could talk across the sea with it just as well as not" (ans. 16, p. 479). He says that Drawbaugh talked into F, and witness listened at B and heard, he says, "quite plain and distinct"; there were no attachments to B that are not there now except the wire. From 1870 to 1876, witness was back and forward at Drawbaugh's shop several times; could not tell how often; the last time was in the fall of 1876; has not been at his shop since; has seen D or something like it; never saw him operate the talking machine after the first time in July, 1870.

Witness says that "after he had taken that glass off the wire he put a box on it." The defendants' counsel then thrust H before his witness, in the endeavor to get him to admit that he saw it, but the witness declined to say more than that he might have, and then followed (p. 481): —

"*Q.* 31. When you went there on this occasion that you refer to, he had taken away the glass tumbler and had substituted in lieu thereof this box machine H, or one like it: is that what you mean?
"*A.* Yes sir."

It is not profitable to fill up the record with objections to leading questions, and on the testimony in chief we did not do it very much; but the Court knows why they were put. Such prompting of a schoolboy would be a confession of ignorance.

P. 481. "*X Q.* 34. When you first saw the instrument F, was it in the same condition as it is now?
"*A.* I judge it was, by the look of it; I can't see much difference, for my part, as far as I can see; of course, it has not the wires attached to it."

It is now merely a wreck.

The witness has lived at New Cumberland at the same place ever since 1870. It appeared upon complainants' testimony in reply that this witness is not reliable about dates nor about his own occupations. In the deposition of Henry R. Musser, his employer (complts, i, 369), it appears that Geistweit was not a millwright at all; that no new saws were put in Mr. Musser's mill in 1870; that Geistweit did not do any work for him, even as a day laborer, until the summer of 1871, when he came as a new hand. He worked for Musser in the

mill up to the summer of 1874. We know that he did not hear talk distinctly through F and B, because that is impossible. He is therefore a witness unreliable even as to dates and his own occupations and the character of his work, testifying to a thing which is a physical impossibility.

No. 61. *Levi A. Bowen*, p. 482. — Age, forty-two; blacksmith; lives at New Cumberland, about two miles and a half from Drawbaugh's shop; known Drawbaugh twenty-three years. In the latter part of September, 1878, he was in Drawbaugh's shop, and says that he saw D and E; Drawbaugh took them out of a cupboard, showed them to him; they did not talk through them. Drawbaugh said he could attach them to a telegraph wire and talk to a person in Philadelphia, and it would not interfere with the telegraph. That is all that he said about them. He saw no other talking machines besides D and E. The statement that they could be attached to a wire and then talk to Philadelphia without interfering with telegraphing is of course false. The slightest connection with the telegraph would prevent speech being understood through them. The significant part of this witness's deposition is that, although he was a friend of Drawbaugh's for twenty-three years, and has lived within two miles and a half of him, he does not appear to have known anything about the alleged talking machine until the fall of 1878, and, in spite of the testimony, the defendants have introduced from some other wild witnesses that the instruments were fastened up all around the shop in 1878, this witness is positive that he did not see any except these two, which were taken out of a cupboard.

No. 62. *William D. Shoop*, p. 484. — Age, sixty-seven; laborer; lives about two miles from Drawbaugh's shop, and has known him all his life. In the fall of 1878 was at Drawbaugh's shop, and saw him working upon a clock, and Drawbaugh told him that he had invented a talking machine, which would supersede the telegraph, and he was too poor to get it patented, but as soon as he could get the means he would have it patented.

There is something ludicrous in this testimony. Mr. Bell's telephones had been in extensive commercial use for more than a year!

they had been in public use for more than six months in Harrisburg; for two years the newspapers had been full of accounts of them, yet this witness represents that under these circumstances he goes to Drawbaugh's shop and Drawbaugh gravely announces this thing to him as a new invention, which he was thinking then of getting patented; and yet Drawbaugh knew perfectly well that Bell had invented the telephone, furnished it to the world, and put it into extensive use. Four months before the date given by this witness, Drawbaugh had gone to the telephone office in Harrisburg, examined the telephones in use, borrowed one and taken it to his shop. (See complainants' witness, Wert, No. 68, complts, ii, 1177.) A community, if this witness correctly represents them, which could be gulled by this claimant into believing at that time that he was the inventor of the talking machine, and that nothing except the need of a little money hindered him from then patenting it, cannot furnish any witnesses fit for a Court to listen to. But the truth is that the defendants' witnesses do not represent the average intelligence of the neighborhood.

If the statement made to this witness at that time was that Drawbaugh had made or thought he had made some modifications in the telephone which he thought of patenting, the story might be and very likely was so far true, because the newspapers had stated during that year that Drawbaugh had made some improvements in the telephone and some modifications of it. The Court must find either that Drawbaugh deliberately gulled the community (if this witness represents them) into the belief of a falsehood, by pretending to them that the telephone at that time was a new thing which he could get patented, or else his intimation that he had made some modification which he thought a patentable improvement has been swelled by this witness and others into the assertion that he had invented the telephone.

This witness has since been employed by the defendants as a runner to hunt witnesses about the bridge question.

No. 63. *George H. Bowman*, p. 487. — Age, forty-two; residence, Hummelstown, Dauphin County; millwright and miller. He says that in February, 1876, he did millwright work for his brother, Cyrus Bowman, who was then the miller at the grist mill at Eberly's Mills. Having no other workshop to go to, he went to Drawbaugh's

shop to do the work. Says that he saw talking machines there; he does not know who was talking into them, but Drawbaugh was listening. He heard sounds coming through the machine, his ear being eighteen inches or two feet off from it (p. 488): —

"*Ans.* 18. It sounded much like as if you were talking into an empty barrel; I heard the sound but could not understand what was said.

"*Q.* 19. Did you notice whether the machine was attached to any wires or not?

"*Ans.* Yes, sir; I did.

"*Q.* 20. State what it was attached to.

"*Ans.* It was attached to a kind of a square box.

"*Q.* 21. Was the box attached to anything, or was it so that it could be taken up in the hand?

"*Ans.* No, sir; it was again the walls somewheres, — stationary."

"*Q.* 25. Did Mr. Drawbaugh say anything about the talking machine to you?

"*Ans.* Not in particular; he showed it to me, — that was about all, — showed me how it worked.

"*Q.* 26. When were you next at Mr. Drawbaugh's shop after March, 1876?

"*Ans.* Not till November, 1880.

"*Q.* 27. Please explain what you mean by your 20th answer.

"*Ans.* The wire was attached to the square box, and the square box is what he called the talking machine.

"*Q.* 28. Did he talk into or listen at the square box?

"*Ans.* He talked into that.

"*Q.* 29. How large was that square box?

"*Ans.* I could hardly tell you; it must have been about eight or ten inches long, as near as I can recollect, and about four or five inches wide, I guess.

"*Q.* 30. What was its color?

"*Ans.* I could not tell you that any more.

"*Q.* 31. Do you remember whether its outside was made of wood or not?

"*Ans.* It was made of wood, but what kind I could not tell you, — whether of black walnut or pine or what kind.

"*Q.* 32. What kind of a contrivance did it have for him to talk into?

"*Ans.* It was some kind of a machine that was hollowed out that he put his mouth to.

"*Q.* 33. How large was the thing that was hollowed out that he put his mouth to?

"*Ans.* I could not tell you that any more.

"*Q.* 34. Did you talk into it?

"*Ans.* No, sir."

"*X Q.* 48. Was not there a bell on top of the talking machine that you saw fastened up against the wall?

"*Ans.* Not that I can mind of."

There are several things which make this a very interesting deposition on the face of it. He describes in such a manner that it is difficult to doubt that he had seen it a square or oblong box as the thing that was talked into in February, 1876. Nothing of the sort has been produced or admitted anywhere by the claimant himself; yet there are several witnesses who refer to such a contrivance. William S. Dellinger, a miller, who was there a few weeks after Bowman, describes in his deposition more than once an instrument which would appear to be the same thing, and which the defendants tried and tried vainly to have him say was H (p. 124, *supra.*) What can this box have been, and why do not the defendants explain what it was? Other witnesses have referred to a square box which was talked into and which was not any of the instruments produced. They are Shettel, No. 28, p. 218; Dellinger, No. 59, p. 475; Moffit, No. 70, p. 519; J. B. Drawbaugh, No. 90, pp. 608, 618; D. Cowens, defts, surrbtl, and complts, iii.

String telephones were publicly known in that neighborhood at least as early as 1877, and were known elsewhere at an earlier date. Those used in that community, as testified to by A. L. Rupp, and as described in the Mechanicsburg newspapers in the beginning of 1878, were made out of a large cigar box. The string telephone introduced in the deposition of Harman J. Eppler (complts, iii, 2288–9, 2293), although that specific instrument is not identified by anybody, may serve as an illustration of this. The instrument which Eppler saw at Milltown, although not in Daniel Drawbaugh's shop, yet in the shop of his brother and nephew, was of that character, and he saw it at a date which, although it is not fixed, he at one time thought was in 1874, and which the defendants, by their cross-examination of him, tried to make the Court believe was in 1872 or 1873. Such an instrument would not be held in the hand, but would be fastened to a wall or partition, so as to get the cord or wire strained. These depositions, and particularly this one of Bowman's, to say the least, throw a strong suspicion of a string telephone over this whole business. Bowman indeed says that he saw something which apparently was a battery, but with the vagueness of his recollection, and

with the fact that there were batteries in the shop, his connection with them and the instrument is not convincing or even satisfactory.

When we come to look at the proof outside of Bowman's deposition it falls to the ground. In the first place he says that he heard sounds through the machine when his ear was eighteen inches or two feet from it and some one else at the machine. We proved by Mr. F. L. Pope (complts, vol. ii, 1137) that it was impossible that he could have heard sounds under such circumstances, unless the instrument was operating as a circuit-breaker. The sounds produced by an undulatory current with any transmitter referred to in the Drawbaugh testimony would not be audible at that distance. This is not denied.

Again, this witness professes to have seen all this while millwrighting for his brother at Eberly's Mills. He never did any millwright work for his brother there, but simply helped him for a few weeks as helper in grinding. While this is not of importance in itself, it shows the vagueness of the man's memory.

There is a little more than that. His reason for going to Drawbaugh's shop is alleged to be that he went there to do millwrighting work. Now he was not employed for that purpose and did not do any such work. Again, Cyrus Bowman and his wife both testified strongly and explicitly that they never heard anything about a talking machine. C. Bowman moved away March, 1876. (See his dep., see complts, i, 666; iii, 2008).

No. 64. *Charles L. Free*, p. 491. — Age, twenty; Camp Hill, which is about a mile and a half from Drawbaugh's shop; has known Drawbaugh eight or ten years. Here is a mechanic living within neighborly reach of Drawbaugh, and knowing him for all these years in a community which, if the defendants' testimony in surrebuttal be true (as it certainly is not), occupied itself largely in talking about Drawbaugh's machine from 1869 on; he does not pretend to have had any knowledge of anything about it until the fall of 1879. He then was at Drawbaugh's shop, and he says that Drawbaugh talked through a talking machine, and he heard

Clearly the defendants' proofs in chief, and their proofs in surrebuttal, cannot both be true; the Court cannot say that it will with confidence believe either.

No. 65. *George L. Hale*, pp. 493, 694. — Age, forty-six; tinsmith. He says that in the fall of 1873 he worked for Hauck Brothers of Mechanicsburg, and went to Drawbaugh's for a load of faucets. Thinks he saw B and C. There was no talk through them, but Drawbaugh said they were to talk with; there was a drum head on B, and a large horseshoe magnet on C, like that on "C reproduced." Says that he was there again in the fall of 1875, and alleges that he then saw D; thinks he has not been there since February, 1876; says that the uprights of C were hollowed out as they are now when he first saw them in 1873. According to Drawbaugh's deposition this is untrue. There is no way of directly controlling his pretended recollection, but we have this fact about it, that the Haucks and the people who regularly worked for them at Drawbaugh's shop during all that time (except Drawbaugh's brother) never saw any talking machines or knew of any.

No. 66. *William B. Stone*, p. 498. — Age, fifty-one; has known Drawbaugh twenty years. Says that on Oct. 15, 1871, he went to George Free and sold him some chicken powders, and on the same day went to Drawbaugh's shop; there saw B and F and C; did not talk through them. Has been at Drawbaugh's shop since, but does not remember having seen any talking machines. The broken tumbler F particularly attracted his attention; he fixes the date because he made a note of the time of the sale of the chicken powders. He came to testify, but did not have his book with him and was sent home by the counsel who called him to get it (p. 501); now produces his book and swears that the entry pointed out was made in his own handwriting and at the time, — 1871 (ans. 5, 6, 7, p. 498); on cross-examination it turns out that the book is a medical almanac not printed until after the midsummer of 1876. He excuses this falsehood by saying that he made the note in an old book which is destroyed and copied it into this. Of course such a witness is not to be relied on a minute.

No. 67. *E. B. Hoffman*, p. 502. — Age, thirty-five; lives at Harrisburg; is a machinist and has known Drawbaugh twenty years. Says that he worked for the Drawbaugh Faucet Company at Draw-

baugh's shop in the spring of 1868, and remained there until September, 1868; began in the latter part of March or April, in cold weather. He says that while working for the Faucet Company he saw Drawbaugh working at something which he called a talking machine, and that the instrument he saw was F or one like it; saw Drawbuagh turning the wooden top and fitting it on; at that time there was nothing but the clear glass; no coating inside. Remembers a freshet which occurred in the latter part of the summer of 1873 on the Yellowbreeches Creek; "it washed away the footbridge at Ditlow's mill [better known as Etter & Shanklin's mill], and also the red bridge up at Heck's." He was at the creek at the time fishing; during that expedition was at Drawbaugh's shop once or twice, and says that he saw something which Drawbaugh told him were talking machines; the one he saw then was I; he had seen C before that; when he first saw C it had a large horseshoe magnet on it; does not remember whether he ever saw B; did not talk through any machine at that time.

P. 504. "*Q.* 18. Were you at Mr. Drawbaugh's shop several times between the summer of 1868 and the time of the freshet?

"*Ans.* Yes, I was there once or twice between that time.

"*Q.* 19. When did you first hear Mr. Drawbaugh talk through the talking machine?

"*Ans.* In the fall of 1871.

"*Q.* 20. Did you understand what he said through the machine?

"*Ans.* Yes, sir; he asked me through it what I thought of the machine; I was down stairs at the time, and he spoke through it.

"*Q.* 21. You say that you afterwards talked through one of his talking machines; do you remember when that was?

"*Ans.* I think it was in October, 1874."

Thus his oath is: talk in 1871, first; in October, 1874, next; not in the summer of 1873.

This is a witness of some significance in one respect, because there are only two men connected with the Faucet Company who so much as pretend ever to have seen or known of any talking machine while that company existed, and this is one of them. But his testimony turns out to be worthless, and this is shown in various ways. In the first place, he says he worked there from about April 1 to the latter part of September, 1868, and saw Drawbaugh turning the wooden top for F, and that the tumbler was not coated inside. Drawbaugh has

himself sworn and produced a number of other witnesses, who swear that F was made in its present form a year before that, and that long before that it was coated inside. It is not very important for us which of these witnesses is telling untruths. Again, he says that he worked there from the latter part of March or the beginning of April, 1878, until the latter part of September; it turns out that he worked there in March and April, 1878, and was paid off May 6, 1878, and never was there again. This is proved by the books produced by the defendants' witness, William L. Gorgas (ans. 48, defts, i, 686). Again, upon the subject of the freshets the witness swears (p. 503): —

"*Q.* 9. Do you recollect a freshet that occurred in that locality some years after the time you have referred to, which washed away several bridges on the Yellowbreeches Creek?

"*Ans.* I do; there was a freshet in 1873, in the latter part of the summer; I can't remember the exact time. I was on the creek at the time. It washed away the footbridge at the mill known as Ditlow's mill at that time, and also the red bridge up at Heck's.

"*Q.* 10. How happened you to be out on the creek at that time, and how long were you there in that vicinity?

"*Ans.* I was up there fishing for fish and turtle; I was there four days.

"*Q.* 11. During any of those four days were you at Mr. Drawbaugh's shop at Eberly's Mills?

"*Ans.* I was, once or twice in the four days."

He says that during that visit he saw a talking machine. If the witness is as far from the truth about the talking machine as he is about the bridges, he is worse than worthless.

There exists in Cumberland County a bridge well known as the red bridge at Heck's; it is not on the Yellowbreeches but on the Conadeguinet, six or seven miles away, and was not washed away in 1873, but was carried away in 1881 by the ice. On the Yellowbreeches the first bridge above Drawbaugh's shop, a mile or two distant, is "Hake's" bridge, a name which is locally frequently pronounced the same as Heck, and the names might very likely have been mistaken. That bridge, however, is not red and never has been, is still standing, and has not been washed away for at least twenty years. The Ditlow bridge was not washed away in the summer of 1873; it was carried away in 1871, and again in the

spring of 1875. In the summer of 1873 there was a freshet which carried away the gang plank that led from the York County side up to the Ditlow bridge, but did no injury to the bridge, and a temporary plank was put up to replace this by the neighboring farmer a day or two after the flood subsided, and the old gangway hauled back and put up by three quarters of a day's work of two men a month or two afterwards. These facts were brought out by the efforts of the complainants upon the subject, by the very voluminous evidence afterwards introduced by the defendants upon the question of the freshet of 1873, and by the complainants' evidence in rejoinder. The purpose of this evidence on the part of complainants was not to change the date of the alleged visit to any other particular time, because there was no year at which these two bridges were carried away; no time could be found which would fit Hoffman's story; the purpose was to show that this witness was a worthless reporter of events which he pretended to have had knowledge of at the time.

If he could expand the carrying away of the gang plank of one footbridge, replaced by the neighboring farmer within two or three days, to the entire carrying away of the footbridge itself, and also to the entire carrying away of a wagon bridge, of course his testimony is thoroughly worthless. He is the only witness called by the defendants in chief, and connected with the Faucet Company, who pretends to having heard of the existence of a talking machine during the time of the Faucet Company. He was recalled by the defendants, p. 689, and there we get a little more inkling about the facts.

He says (x-ans. 5, p. 689) that he was at Drawbaugh's shop several seasons after the fishing excursion, to wit, 1873, 1874 and in 1877 he thinks; that is the last time he was ever there, Now, if, being there in 1877, he saw B and F, and then C and I, and according to his own story, no other instruments, his story would be somewhere within the region of possibility.

In his deposition he does not hint at the presence of any one else; in surrebuttal the defendants call two men, William Maglaughlin and his son, who say that they were with this man Hoffman on this fishing excursion. And in their zeal to support him these two re-enforcing witnesses overdo the business. In the first place, in

spite of the absolutely positive and certain proof from the defendants' own witnesses that the footbridge was not carried away, but only the gang plank knocked down, these men swear that they with their own eyes saw it go or saw half of it go. That is untrue. The elder of the two men, the father, is little more than a loafing fisherman and hunter, and has brought up his son, twenty years old, in Harrisburg, unable to write his name.; he had to sign his deposition with a mark. This enterprising father swears that he went with Hoffman on this occasion to Drawbaugh's shop; that Drawbaugh spoke to Hoffman about a talking machine, saying in substance that he had got one, as if it were a new thing to Hoffman.

Now this is inconsistent with Hoffman's pretence that he knew of it and had talked of it two years before. Again, this Maglaughlin says that upon this occasion they actually talked through the instrument; Hoffman is positive that they did not. Maglaughlin says (defts, surbtl, 752): —

"*Q.* 22 Tell us all that was done at Drawbaugh's shop while you and Mr. Hoffman were there at that time.

"*Ans.* We got a net from him to catch bait-fish with, and I think he said, 'Ras, I've got a talking machine,' or 'Hoffman, I've got a talking machine,' I am not sure which; I think Ras passed the remark, 'You are always getting up something new.' He went up stairs. He told Ras to listen at a concern that he had there, and he went up stairs and spoke through it, and I laughed at the idea. Ras told me to listen; he said he could hear him, and answered him and told me to listen, and I did."

Maglaughlin said that he understood; that he was on the first floor, and Drawbaugh upstairs; that he did not go upstairs (x-ans. 79, p. 761). Being shown F, B, C, "C reproduced" and I, he says (p. 753): —

"*Ans.* This is the only one that I remember of seeing at that time (*taking up I*). It was something similar to that one; it may not have been the same one, but it was similar to it. And there was another one there with a mouthpiece to it.

"*Q.* 27. While you were there at the shop at that time did Mr. Drawbaugh tell you how the instruments were operated or what caused the speech to be transmitted along from him to you?

"*Ans.* He didn't tell me; him and Hoffman were talking together, and I didn't pay a great deal of attention to it myself.

"*Q.* 28. While you were there at that time did you understand whether the apparatus was worked by electricity or not?

"*Ans.* I did not."

The son was not asked about talking machines.

This is only one of the many cases where testimony given in the opening proofs by the person more directly concerned is very much expanded and improved upon under the stress of surrebuttal, and when the subject has been talked about for three or four years in the community where these witnesses lived, and one after another is brought up to the testifying point; their ears and their imagination have beguiled their memory — if they mean to be honest. The matter of the bridge is fully discussed in the body of the brief, and is important chiefly as an illustration of the worthlessness of the defendants' depositions.

No. 68. *George Free*, p. 505. — Age, forty-one; residence, White Hill, which is about a mile from Drawbaugh's shop, and is the nearest railroad station; present occupation, cattle dealer. Has known Drawbaugh thirty-five years. In 1874 or 1875 (assumed by the defendants in taking Oyster's deposition to be 1875), and he thinks in May or June, he went with John A. Oyster, on a Sunday, to Drawbaugh's shop, and says that Drawbaugh showed him his talking machine, and talked through it (p. 306): —

"*Q.* 12. Did you hear and understand what he said through the machine?

"*A.* Yes, sir; I did part of it; I could not understand him all."

Says that he has seen A, B and F or something like them, and they "might be" the machines he saw on that Sunday (p. 507): —

"*Q.* 17. Please look at the machines 'A,' 'B' and 'F,' now shown you, and state whether you ever saw them before; and if so, when you first saw them, so far as you recollect.

"*A.* I have seen them before, or something like these. These might be the machines. I first saw them on that Sabbath, when I was at the shop, as I have above testified."

Thinks he listened at "A or one like it." Says that there were at that time some vessel-shaped jars containing a green and white substance or liquid connected by the wires with the talking machine. It will be observed that this implies a battery transmitter, and no battery transmitter is alleged to have been in existence at that time except F,

and the witness says he saw F at that time. If the occurrence related by the witness ever happened at any time, it proves that whenever it did happen Drawbaugh had no better transmitter to exhibit to a visitor than F, and F, as we know, is not a practical instrument even in connection with A. But the date is by no means well fixed by him to be even as early as midsummer of 1875, the date assumed for him; he says that from the summer of 1874 down to the beginning of 1880 he was at Drawbaugh's shop from time to time and had seen Drawbaugh at different times working at talking machines; was there five or six times in a year, both on Sundays and on week days; used to go there to bathe in the creek close to the machine shop, and as Drawbaugh and the witness had been intimate friends the witness would always stop in to see him. He saw him frequently working at talking machines in 1878 and 1879; Drawbaugh used to attend church in the morning and go to work in the afternoon. Between the summer of 1875 and the spring of 1878, saw him working on the talking machine or doing something with it quite a number of times, and from time to time saw other talking machines there which he had not previously seen. Between 1878 and 1879 Drawbaugh stated that what he wanted to accomplish and thought he could, was to make a machine that could be heard across the room without putting it to the ear, "and when I would ask him whether he had got this accomplished he would say, 'No, sir; I am working at it and I am agoing to get it accomplished.'" The witness testified in his fourth answer that the visit was either in 1874 or in 1875; in redirect question 50, defendants' counsel assumes that it was in 1875 (p. 511):—

"*Q.* 50. At the time you saw this machine B there, in the summer of 1875, on that Sunday when Mr. Oyster was there with you, do you remember whether the tin box was open at both ends as it is now?

"*A.* Indeed I don't; I can't remember whether it was open or whether it was shut."

But why did they not see D and E? It can only be because D and E did not exist, — whenever this visit was. They are so much better than the others that they would have been shown and undoubtedly used.

The witness says that they were making the Kline patent axles in the shop at the time (x-ans. 47, p. 510), and that his visit with Mr.

Oyster was to get one of those Kline axles; they were making them in 1875 and 1876, but not in 1874. All this is a statement on the part of the defendants that this man, living only one mile from Drawbaugh's shop, his intimate friend for a whole lifetime, never saw any alleged talking machine at Drawbaugh's shop until June, 1875, does not pretend ever to have heard of them before, and at that time had B, F and A exhibited to him. Now, if this testimony is to be taken as true, there is an end of the defendants' case. It is impossible, under such circumstances, to pretend that Drawbaugh could have had a practical working machine there for eight years before that, and this man have not known of it and seen it. And, since this witness says that, in the summer of 1875, D and E were not displayed to him, not shown to him, and that the best instruments Drawbaugh exhibited then were A, B and F, and that the best that could be done with them was expressed by the witness's answer, "I understood part of it, I could not understand him all," without saying how much he understood (except "Yankee Doodle"), while the fact was developed by the tests in New York, that even an improved form of F and A will not transmit speech to any practical extent,—this deposition proves that the claimant did not have a practical instrument in the summer of 1875, and overthrows the whole fabric which the defendants set up in their answer and have sought to support by their testimony.

But one fact which did not come out in the examination of this witness makes him stronger for us. It appears subsequently that Free is not only a friend of Drawbaugh, but a connection by marriage; the wife of Free and the wife of George Drawbaugh, the nephew and so to speak companion of Drawbaugh, living along side of him, and frequently working in his shop, were sisters (see depositions of Mrs. George Drawbaugh and Mrs. George Free, defts, ii, 721, 723). The fact is, that George Free is a witness very injurious to the claimant, and his counsel realizing this fact, sought to overcome the weight of it. They called George Free's wife, and had her testify that she visited the shop with her sister, Mrs. George Drawbaugh, in September, 1873, and that she heard perfectly good speech through the machine though it was only a few words; but her testimony and that of her sister, Mrs. George Drawbaugh, are evidently the result of mere imagination. Mrs. George Drawbaugh does not know any-

thing about any talking through the machine; Mrs. George Free prudently refrains from the attempt to identify any, and her testimony is altogether too weak to overthrow that of her husband.

No. 69. *John A. Oyster*, p. 511.—Age, twenty-nine; Camp Hill; farmer. He says that he and George Free were together at Drawbaugh's shop at a time which he thinks was the 21st of June, 1875. He thinks that they saw some talking machines at their visit, and that Mr. Free went to another part of the shop to listen, while the witness remained with Mr. Drawbaugh, and did not have the curiosity to listen. Of course he swears to the same instruments that Free does, A, B and F. He says that *subsequently* he saw other talking machines, but he cannot identify any, and the description which he attempts to give of the *subsequent* one in his ans. 23 does not conform to any instrument whatever.

"*Ans.* 23. I remember a larger box or machine [larger that A], perhaps eight inches in diameter; I can't say now whether it was a round machine or octagonal; I think it was an octagonally shaped machine; also some smaller machines or boxes."

The account which this witness gives of the explanation Drawbaugh gave him of how the thing worked is a perfect description of a string telephone; and in the same answer he virtually takes back the statement that he saw Drawbaugh talk through the machine, and substantially admits that he does not recollect (p. 514):—

"*X Q.* 25. On the occasion of your visit with Mr. Free, did you see Mr. Drawbaugh talk into any of these machines; and if so, which one?

"*A.* He may have talked through the machine. I can't remember positively that he did, but think he did. I could not answer which one, not remembering positively that he did. I remember distinctly his showing them to us and explaining the principles on which they were to act, comparing the film or thin substance spread over the end of a tin can, as I remember it, to which a wire was attached or came close to it, the sound to strike that and be conveyed in the same manner that the sound strikes the ear; and that, I know, took place on that day, because that is one of the points I took notice of. I think I did not take so much account of the test as I did of the principles. I was more interested in the explanation of the principle than I was in the test, and that is the reason I do not remember distinctly of his speaking through it."

The witness does not mention electricity.

The date of the visit of these two witnesses, however, whatever they said, is worse than doubtful, and was probably in 1876. Free does not profess to have any means of fixing it. He is not even quite sure whether it was 1874 or 1875; it certainly was not 1874. Oyster connects it with the repair of a spindle on a reaping machine. He twice had Kline axles put on his reaping machine, — once in the latter part of June, 1875, and once in the latter part of June, 1876, and there is nothing whatever except a purely arbitrary memory to fix whether the alleged exhibition of the so-called talking machine was at one time rather than at the other.

They say that they saw other instruments, but not D and E. This is substantial proof that D and E did not then exist.

No. 70. *Dr. John W. Moffitt*, p. 516. — Age, forty-six; Harrisburg; dentist; has known Drawbaugh twenty-five years. The most interesting part of this witness's history, as bearing on this case, is ascertained subsequently from another witness, Theophilus Weaver, called for the complainants. Dr. Moffitt is a man who has shown a considerable interest in patents, taken out a few patents of his own, owned patents taken out by others, and has given considerable employment to Mr. Theophilus Weaver, a patent solicitor in Harrisburg, who has known him well for twelve or fifteen years past. Now, whatever knowledge he has of the alleged talking machine, it was such that he never was willing to put one cent into it, although he was putting money into other inventions, and he never spoke of it to his patent solicitor, who was a personal friend both of himself and of Drawbaugh, although he was consulting that solicitor about other patent enterprises in which he embarked and talking with him about Drawbaugh's inventions. (See Weaver, complts, i, pp. 383, 389, 401, 420, 422, 424, 495 and *infra* in this abstract.)

In 1878 this witness became a partner with Drawbaugh in his improved molasses faucets, and induced Chellis, now a defendant here, to join them. There is something ludicrous in this attempt to make the Court believe that a man of intelligence and sufficient means to go into a number of patent enterprises, even in a small way, with sufficient faith in Drawbaugh as an inventor to go into a

patent enterprise with him, while his nephew Shettel went into another one with him (the clock), knew that Drawbaugh had practical speaking telephones a number of years before they were known to the rest of the world, lived in Harrisburg and read in the papers of 1876, 1877 and 1878 about the importance of the invention and the avidity with which the public seized upon it, and then, in 1878, having determined to become a partner with Drawbaugh in some patent, deliberately selected an improvement in molasses faucets and laid aside the telephone. If such a story could be true of any witness he would be a man so lacking in intelligence and sense that he would not be believed. But he put the climax to his deposition when he stated the reasons why he went into the faucet with Drawbaugh rather than the talking machine; they were in substance that *he did not believe that Drawbaugh had invented the talking machine early enough to make out a case against Bell* His testimony on that point is as follows (pp. 519, 520): —

"*Q.* 24. Why did you finally decide to go into the faucet, rather than the talking machine?

"*A.* Because I understood the faucet business better than the talking machine, and, having asked Mr. Chellis what he thought of the talking machine as a speculation enterprise, he discouraged it, and encouraged the faucet business, because, as he stated, there was more prospect of making money out of it — the faucet — in a short time, than out of the talking machine."

"*Q.* 25. When Mr. Drawbaugh first asked you to go into the talking machine with him, had you heard it talk, and did you know that it would operate as he claimed for it?

"*A.* I heard it talk, but, *up to the time that I went into the faucet business*, looked upon it more as a toy or matter of amusement than an instrument of any utility."

P. 520. "*X Q.* 28. How long before you went in the faucet business did you have the conversation with Mr. Chellis about the relative merits of the talking machine and faucet?

"*A.* As near as I can remember, a month or two.

"*X Q.* 29. Your conversation must have been somewhere in the fall of 1878, I suppose?

"*A.* I think so.

"*X Q.* 30. Did he tell you why he thought there was more prospect, etc., as you have stated?

"*A.* Yes, sir; I remember that one of the leading points he stated was that the telephone was already in use, and that Dan

would have a hard time to establish his claim on it, and that there would be more money in the faucet than in the telephone business. His meaning was that Drawbaugh would have to establish priority of invention, etc.

"*X Q.* 31. Did you and Mr. Chellis go into this faucet business as partners together and at the same time?

"*A.* Yes, sir; with Mr. Drawbaugh, one-third interest each."

They attempted to amend this a little in his twenty-sixth answer, but without much success. But on cross-examination the real reasons why Dr. Moffitt and Chellis did not take up the telephone appear more explicitly as follows: —

Moffitt testifies that the discussion which he had with Chellis as to whether Drawbaugh could antedate Bell was in the fall of 1878, and a month or two before they became partners with Drawbaugh on the faucet (cross-ans. 28, 29, p. 520): —

"*Q.* 30. Did he tell you why he thought there was more prospect, etc., as you have stated?

"*A.* Yes, sir; I remember that one of the leading points he stated was, that the telephone was already in use and that Dan would have a hard time to establish his claim on it, and that there would be more money in the faucet than in the telephone business. His meaning was, that Drawbaugh would have to establish priority of invention, etc."

Chellis testified that for some months after they went into the faucet business he did not believe that Drawbaugh could antedate Bell (p. 548): —

"*Q.* 13. During any of your early conversations with Mr. Drawbaugh on the subject, did you say anything to him about Bell's patent and claim of priority over all others?

"*A.* Yes, sir, and I advised him to drop it,— the telephone, — as he could not antedate Bell; he said he did not know about that, that he had been working on it a good while; it was his way of expressing himself; when I would say you can't antedate Bell, he would say, 'I don't know about that, I have been working at it a good while."

The Court therefore has before it the fact that a discussion as to the relative dates of Drawbaugh and Bell *between this witness and the defendant Chellis* in order that they might determine the question whether it was worth while to go into the talking machine with Drawbaugh resulted in their determining "that he could not antedate Bell."

And now that witness is called to prove, and if you take the face of his deposition without criticism and believe what it is offered for, it certainly would prove that Drawbaugh can antedate Bell, *and that this witness knew* from repeated use of Drawbaugh's instruments for years at least before the Bell patent came out, that he could not only antedate Bell in date, but had in 1872 better instruments than Bell had in 1878. This is one of those instances so frequent in this case, where the deliberate conclusions of the parties having knowledge and means of knowledge before this controversy began are fatal to the claim, and where the persons who in 1878 were perfectly satisfied that Drawbaugh could not antedate Bell are now brought forward in a revised frame of mind to say that they always knew he could.

Inasmuch as there has been some talk made about the importance of Mr. Drawbaugh's clock inventions, it is useful to note that this witness had a clock for a number of months in his house, and says that it did not keep good time, and that he finally told the clock company that they must make it run better or take it away. And it appears elsewhere that they took it away.

The deposition of this witness, however, is hardly sufficient to stand alone when compared with the other testimony for the defence; he has nothing to fix any dates by; he has known Drawbaugh for twenty-five years, and since 1872 or 1873 has been in the habit of frequently visiting his shop; he went there "for trout fishing in the run, and the interest I took in the various and numerous inventions that Daniel Drawbaugh was making and experimenting on" (ans. 4, p. 516); he says that he has seen talking machines, "as near as he can recollect, in 1873, first, and from then till now" (ans. 5, p. 516); that in 1873 he saw F and C and B. He is not quite sure whether he talked through them then or shortly after, but the second of the two visits, on one of which the talk took place through the instruments, could not have been more than a month after the first; this, if the witness's testimony be good for anything, puts both of them in the summer or 1873. The witness says (p. 516):—

"*Q.* 5. Did you ever see any talking machines there, and if so, when did you first see them, to the best of your recollection?

"*Ans.* I have, and as near as I can recollect in 1873 first, and from then till now."

"*Q.* 12. At the time when you first saw the talking machines, about 1873, did you see any of the instruments now on the table before you; if so, please point out which?

"*Ans.* I did, and I saw this one (F) and this (C) and this (B); those are all that I saw the first time."

"*Q.* 13. Do you remember whether Mr. Drawbaugh talked through the instruments at that time?

"*A.* I can't give any definite time when he talked through any of these instruments, whether it was the first time or a short time after; the first time that he talked through them to me was shortly after I had any knowledge of his having a talking machine, when he handed me an instrument similar to this (indicating A), which he directed me to place to my ear, stating that he would go down stairs or in some other part of the building, and that I should listen. He went, and I heard Mr. Drawbaugh's voice asking me if I heard him talk. 'Do you hear me talk?' was the way he put it. I was surprised, and looked around, expecting to find Mr. Drawbaugh behind me; but did not find him. He came in presently, and attempted to explain to me the principle on which the machine operated; I did not understand his explanation. He alluded to the vibration of a bee's wing to illustrate how the diaphragm operated to produce the sound; that is about all that I remember distinctly on that occasion. There was a great deal more said that I do not remember."

There was hardly a machine in existence in the world even in 1878 of which such assertions could be made; it is perfectly certain that with F as a transmitter, and any instrument which the claimant even alleges that he had in the summer of 1873 as a receiver, — that is, C or I or B, — no such result could have been produced.

This witness, however, is a little more enterprising than the claimant. He is perfectly certain that the instrument through which he heard talk in the summer of 1873 was A. Now the claimant does not even allege that A existed even within a year of that time. Then the witness says that he has seen D and a good many others, "but cannot give any definite dates of any of them except the first three, and that is not very definite" (p. 518, ans. 16).

Dr. Moffitt continues (p. 517): —

"*Q.* 14. About how long do you think that was after he showed you the machines B, F and C?

"*Ans.* As I visited Mr. Drawbaugh's shop frequently, some weeks two or three times, I cannot state positively whether it was two days or two weeks thereafter; but I am positive that it could not have been one month thereafter.

"*Q.* 15. From that time, down to the time when you went into

the faucet business with him [December, 1878], did you from time to time see other talking machines in his shop?

"*Ans.* I did.

"*Q.* 16. Please look at the machines D and E, now shown you, and state whether or not you recollect seeing them or either of them in his shop; and, if so, give us your best recollection as to the time when you first saw them.

"*Ans.* I did see an instrument of this kind, shape or style; this one (D) looks like the one I saw; I cannot state positively the time because I took so little interest in the machine that I gave it only a passing notice; I should have said, instead of the machine, the whole talking-machine business; I took very little interest in it; I will sum the whole matter up in this way, in regard to seeing the different instruments; that I recognize nearly all the instruments on the table as those I saw in Mr. Drawbaugh's shop from time to time, as I would be there, but cannot give any definite date as regards any of them except the first three, and that is not very definite."

And then comes a curious statement: the witness having said in the first place that one of the reasons which led him to the shop was "*the interest he took* in the various and numerous inventions that Daniel Drawbaugh was making and experimenting on," says, referring to the instrument D: —

"I cannot state positively the time [I saw D], because *I took so little interest* in the machine that I only gave it a passing notice; I should have said, instead of the machine, the whole talking-machine business — I took very little interest in it" (ans. 16, p. 518).

Now, a talking machine or a supposed talking machine, which a man of intelligence interested in inventions, particularly in Drawbaugh's inventions, was so affected by that, having once listened at it, he took thereafter "but little interest in it, giving it only a passing notice," is proved by that fact alone to be not a practicable working instrument. And when we follow this up with the fact that that witness in 1878, discussing with a friend whether Drawbaugh could antedate Bell, came to the settled conclusion that he could not, the Court must find that this deposition is fatal to the claimant's case, or else must be dismissed as not fit to be regarded.

It is impossible to believe that any intelligent man can have so acted in the face of a real speaking telephone — interested in the inventor, seeing the instruments every few days for six years, taking no interest in them, never wanting to use them, never speaking of them to others, except in 1878 to condemn this claim.

No. 71. *Charles L. Drawbaugh*, p. 522. — Age, twenty-six; son of Henry F. Drawbaugh. Says that between one and four years before his father began to run his car line (the car line began in May, 1876, v. p. 113, *supra*), he understood his uncle Daniel to say that he had a machine to talk to a distance, but he cannot recollect that he saw one at that time. He says that a year or more before beginning to run the cars, his cousin, Harmon Drawbaugh, showed him a talking machine in the shop and talked through it, and that he understood what was said. He was at his uncle's shop a number of times afterwards. He has an impression, but not a very definite one, that he heard his uncle speak about it once when he was there in January, 1880, which was only sixteen months before he testified. Cannot recollect what was said then (p. 524): —

"*Q.* 18. Did you ever hear your uncle say anything more about talking machines after that first conversation?

"*A.* I think the last time that I was down at his place he was talking about it; I can't recollect what it was that he said; I can't recollect whether or not I heard him say anything about it between the first conversation and the one last mentioned. I never took much interest in it."

This witness is a nephew of Drawbaugh. He was at his shop during the years 1876, 1877 and 1878 several times, apparently quite often; he was running a line of cars with his father to New York, Philadelphia and Baltimore. Of course he read the papers and knew what a noise the speaking telephone was making in the world, and yet the effect of all he knew about his uncle's work was that he took no interest in it and never spoke or heard him speak on the subject. It is worth noticing, also, that this witness does not pretend ever to have even heard of it before the time that he says he heard his uncle say something about it, which he does not definitely state, except that it may be from one to four years before May, 1876. The defendants had been pretty apt to get into the depositions of their witnesses the earliest dates which any of them are willing to state as the time when they heard even a rumor of a talking machine at Drawbaugh's shop. When we come to see afterwards in surrebuttal the attempt which the defendants have made to prove that Henry Drawbaugh, the father of this witness, had

known and talked through these machines in 1868, four years before he himself says he knew of them, and the attempt to prove that in the neighborhood where Henry Drawbaugh and this witness Charles lived, twenty-five miles from Drawbaugh's shop, and among his friends it was common talk, the ignorance of his own son, living in his house, assisting him to run his freight line, is perfectly conclusive against the truth of their story. (See H. F. Drawbaugh, p. 118, *supra*.)

No. 72. *Daniel C. Jones*, p. 525. — Age, thirty-one; Harrisburg; clerk in a hat store; lived at Eberly's Mills from the spring of 1870 to the spring of 1871. During that time was at Drawbaugh's shop a great deal. Asserts that he has never been there since; that he moved away from Milltown in 1871; that while there he saw a machine which he was told was a talking machine; that the thing he saw was something that very much resembled B. Harmon K. Drawbaugh told him that it was a talking machine. Never talked through it nor heard anybody talk through it. This was within two months of the time when Harmon Drawbaugh returned from the West, and it appears elsewhere that Harmon Drawbaugh returned from the West about January, 1870.

This is one of those pretty pieces of second-hand evidence which the defendants are in the habit of introducing to show that Drawbaugh had a practical talking machine there at that time; but, as usual when one gets towards the source, it turns out to be unfounded. Harmon Drawbaugh himself explicitly testifies that though, he alleges, they had F and B there at that time, *they could not transmit words through them, and did not even attempt to*, but only sounds that had more force. (See Harmon K. Drawbaugh's deposition, p. 173, *infra*.)

The objection to this class of testimony is not merely nor chiefly the technical one that it is hearsay; it is that it is false. The defendants' record is full of such instances. The Court must conclude that, when they introduce proof of what an accessible neighbor has said and do not call the neighbor, it is because the story has grown so that the real testimony of the reported person would hurt them and not help them, *and that they know it*. So many instances of this have been exposed in the body of our brief out of the defendants'

record that it was unnecessary for us, in the short time available for our rejoinder, to follow up such proof further.

No. 73. *David H. Good*, p. 527. — Age; forty-one; Yocumtown, York County; "merchant," — which means country storekeeper; has known Drawbaugh since 1867; lived at Eberly's Mills from the spring of 1867 to the fall of 1870, "did business there as a merchant." What he did was to keep store in a village of seventy-five inhabitants. He says that in the fall of 1868 he overheard Drawbaugh tell two men in his presence that he had a machine which would convey sound or talk as plain as he was talking then. That seems very good testimony for Drawbaugh, but when we consider the character of the instruments which Drawbaugh alleges that he had in 1868, and that even improved forms of those instruments are not able to accomplish anything to-day, together with the fact that Harmon Drawbaugh swears positively that eighteen months later they did not even attempt to get words through, it is certain that either this witness is making up a story or that Drawbaugh was drawing the long bow to a prodigious extent. The utmost fact that can be claimed for the defendants, if we should admit all their stories of dates to be true, was that he had an instrument by which he desired to transmit speech, but which was entirely incapable of doing so. One such selected instance as this shows the worthlessness of this hearsay testimony and common report, and yet three quarters of the defendants' proofs consist of nothing else. This witness does not pretend that he ever saw the instruments or that Drawbaugh ever talked to him about them, but he makes a statement about the character of the community which shows how readily such stories, without any substantial foundation, could be started and be believed, and how from such a community the testimony produced by the defendants could be procured without any foundation in fact for it. The witness testifies (p. 529): —

"*X Q.* 15. When you heard him say that he had got a machine that would do what you have stated he said it would do, I suppose you believed, right off, that he had got such a machine, and that it would do it, did not you?

"*A.* I have every reason to believe it.

"*X Q.* 16. What do you mean by 'every reason'?

"*A.* I never knowed him to say anything of the kind but what he brought to perfection, in the way of machinery and invention.

"*X Q.* 17. Did not it strike you as rather a startling kind of machine, if it could do what he said it could do?

"*A.* Yes, sir.

"*X Q.* 18. And notwithstanding that, you were ready to believe right off that he had invented and made such a machine, just because you heard him say so to two men in your store; is that so?

"*A.* Yes, sir.

"*X Q.* 19. Do you think that the most of people who knew him in that community were disposed to accept his remarks about his own inventions, with the same confidence?

"*A.* To a great extent.

"*X Q.* 20. I wish you would tell me everything else you know personally, or that you have ever heard him say, about any talking machine.

"*A.* He said he could greatly improve it from what he had; I never heard anything afterwards, I believe."

But there is another trouble with this witness's testimony. He says that he heard Drawbaugh make this statement to two men in his presence in the store. He kept a store there all those years and he does not pretend to any general talk about it; he does not pretend that he ever heard anything else about it; he was asked everything else he ever heard from Drawbaugh, and states in substance that he never heard anything except at this conversation (p. 529): —

"*X Q.* 20. I wish you would tell me everything else you know personally or that you have heard him say about any talking machine.

"*A.* He said he could greatly improve it from what he had; I never heard anything afterwards, I believe.

"*X Q.* 21. Was this remark in your last answer made on the same occasion that you have already testified about?

"*A.* Yes, sir."

He says that the two men present to whom Drawbaugh was telling this little anecdote were "Mr. Hart" and "Mr. Ditlow," though he would not be positive as to Mr. Ditlow (cross-ans. 14, p. 528). We called Mr. Hart, a resident of Milltown for fifty years, and he cannot remember that he ever heard of Drawbaugh's talking machine before he heard of Bell's telephone, though he knew of Drawbaugh's other inventions. There have been five Ditlows on the stand, and one

other, a man of about Mr. Hart's age, was visited by Drawbaugh for information in connection with this case. (See Drawbaugh's deposition, defts, ii, 879.) None of them ever heard of this alleged conversation, and no person is produced who pretends to have heard of it. The witness further says that when he moved away Drawbaugh owed him for store goods, for groceries and so forth, $64, and he took his note for it, and that the last payment on that note was made in 1873 on the judgment for the balance due; and Mr. Drawbaugh and the defendants let him swear to this. The judgment was not obtained until November, 1875, was satisfied April 3, 1876, and Drawbaugh states that he remembers the date when it was paid. (See Drawbaugh's direct examination, defts, ii, p. 892, and certified copy of the docket, defts, exhibits, p. 55.)

This is one of the instances of the value of the memory of a witness testifying to matters which he and Drawbaugh knew personally of, when contrasted with a record date; and this witness, brought merely to prove a date, is, of course, worthless as to the one as he is to the other.

No. 74. *D. E. Byers*, p. 531.—Age, twenty-seven; has been telegraph operator ever since 1869, when he was fifteen years old. Says that "a good many years ago," "I cannot say—to the best of my recollection, it might be six or eight years [before June, 1881], I cannot get at it any nearer than that," and several years before he heard of the invention of electric telephones, Henry F. Drawbaugh spoke to him of a talking machine which he said his brother had invented. The defendants' counsel, against the objection of the complainants, read to the witness ans. 111 of the deposition of Henry Drawbaugh, and asked the witness whether he had such a conversation as that recited by Henry Drawbaugh, and witness answers: —

"It might have been that that is the conversation that took place; it has been so long ago that I don't remember the exact words, but remember of laughing at the idea of such an invention."

No. 75. *George Bricker*, p. 532.—Age, sixty-two. He says that he in 1870 heard a man say that that man had heard that Drawbaugh was working upon a machine, the purpose of which was to convey

sound to a distance by electricity; "my recollection is indistinct as to whether it was the sound of the voice." At some time, which he thinks was during the year 1870 or 1871, he asserts that he went to Drawbaugh's place to see it, but did not find him, and afterwards meeting him he asked him about it and how he got along.

(P. 532.) "He [Drawbaugh] said the trouble with him not making more progress was owing to his not having any money to go on and complete it as fast as he would like to, and having no one to assist. He told me that outside people looked upon him or considered him crazy or something like that, and were not willing to assist him with money to complete his invention. That is the last that I recollect of meeting him and having any conversation with regard to this machine."

This was one of the earlier instances of a practice which the defendants in the surrebuttal followed *ad nauseum*, of calling a man to state what he heard somebody else say they had heard about the existence of the alleged talking machine. This man Bricker names three gossips in Harrisburg, so that if his story was true, Drawbaugh's talking machine was known not only in his own village, but in Harrisburg in 1870, but the defendants do not call either of these persons, nor any other man who pretends ever to have heard it mentioned in Harrisburg. The witness professes to have known Drawbaugh for twenty-five or thirty years, but his cross-examination shows, if his deposition is to be believed at all, that in spite of that he never heard that Drawbaugh had made any experiments upon any other invention. The defendants' counsel, with a curious punctiliousness, having called this witness to testify merely to hearsay of Drawbaugh's inventions, strenuously objected to the witness saying that he knew of any other inventions of Drawbaugh, because that might be the result merely of hearsay, and instructed the witness not to answer the question. It would have been better to have struck out the whole deposition and not burdened the record with it.

No. 76. *Henry Snyder*, p. 534. — Age, sixty; commission merchant. Henry Drawbaugh had testified that at his brother Daniel's request he had asked "some persons" to assist his brother with money, and this witness is brought to attempt to substantiate that assertion. Henry Drawbaugh himself, evidently a man of means, could

hardly have urged to others an appeal for aid or seriously with any force or with the slightest expectation that anybody would listen to it, inasmuch as he himself ridiculed the whole matter and thought it was too absurd for any man to risk any money in, though he himself was a man of means. This witness Snyder says that Henry Drawbaugh asked him to furnish the money to get a patent and to procure different kinds of machinery, etc., and then the witness adds this significant remark (p. 535) : —

"I asked Harry why he would not try and get a man of mechanical genius that could assist him, that I could be of no advantage to him, only in the money matter. Harry assured me that it was nothing but the money alone that was wanting, that he had within himself all the knowledge that was requisite to establish the talking machine he intended to put into use, and that unless he could obtain a patent all his time and labor would be spent or lost in vain. I however declined giving them any assistance, *having no knowledge or idea of what he intended to establish or accomplish.*"

It is perfectly evident from this that no serious representation was made to this man, no instrument shown him, no definite ideas given him, and (if the incident ever occurred at the time alleged) this must have been because Henry Drawbaugh had no definite idea to give him, and no belief that a practical instrument existed. Contemporaneous conduct is better proof than a ten-year-old recollection.

Again it is perfectly certain that Drawbaugh then did not know how to make a talking machine fit to be put into use, for the witness states the date as in 1872 or 1873, and all the instruments alleged to exist at that period were not capable of the transmission of speech to such an extent as to make them worth putting into use. The witness says that Henry Drawbaugh spoke to him a number of times to this effect, and if we can believe precisely the way this witness puts it, Henry Drawbaugh thought and represented that the machine was an assured success and such as to justify any man putting in between five and ten thousand dollars. Now Henry Drawbaugh's express testimony is that he did not believe any money could be made out of it. This witness's story does not agree with Henry Drawbaugh's story, nor with the actual capacity of the machines alleged to exist at that time.

The last clause of the answer above quoted exposes the vice of

this deposition. The witness has no real recollection of what he was asked to aid in, and has now confounded it with or been persuaded to believe that it was a telephone.

No. 77. *David K. Ernst*, p. 538. — Age, thirty-three; lives in Newville; has known Drawbaugh all his life; was raised at Eberly's Mills. Says that he went to Drawbaugh's shop to buy a pump, and thinks that John Bloser was with him, and that he thinks it was in 1872; he names that date because he thinks that Bloser at the time was rebuilding his father's house, and he thinks that was done in 1872. He says (ans. 5, p. 539): —

"I asked him, when we went there, to show us his things, — machinery, — and he showed us quite a number of things; among them was a dial telegraph, which we operated a little on; I thought it a very nice machine. I asked him why he did not go on and finish that; I thought there was money in it. Oh, he said, he was working at something better, which he called a talking machine. I could not say positive that he showed us the machine, although I rather think he did. I saw some of the pieces this morning in Mr. Jacobs's office, and they looked natural to me, but I could not positively identify them; the ones that I refer to as seen this morning were a glass tumbler and a green tin can."

That is all that the witness says about the talking machine, or any of Drawbaugh's inventions. He says the parties who worked in the shop told him that Drawbaugh had patented these pumps.

No. 78. *John Bloser*, p. 540. — Said that he was present and heard Ernst's deposition, and being asked, on direct examination, whether it agrees with his recollection, he answers (p. 540): —

"*A.* 3. I don't remember quite as much as he has said; I remember going there. I don't know that I can say anything about what occurred in the shop. I remember being in there, and saw quite a number of things there; the impression on my memory is that he, Drawbaugh, spoke about the talking machine."

And that is all he says about the talking machine. He says that he thinks that they made the visit while he was at work on the house. And he thinks that he worked on the house in the spring of 1872.

These two depositions, so far as they are worth anything, are proof of some value *against* the claimant's story. The men went there and asked to see his things, and they were brought out and exhibited; they were interested, they said, in the dial telegraph, and Drawbaugh brought out and showed them something which he said was better, but did not operate it. If the thing was capable of operation, he would have operated it, since he professes to have been in the habit of showing it to everybody, and these men apparently took particular interest in it and were old friends.

Next, if this testimony is to be taken as proof of what the witness states in it, it is certain that C and I did not exist at that time, for all that was shown to the witness upon his inquiring about Drawbaugh's inventions were F and B. According to Drawbaugh's schedule of events, C and I had then existed a year or two, were much better instruments, and being magneto instruments needed no battery or adjustment, but were ready to talk at any moment. The account of the alleged visit given by this witness is substantial proof that no such instruments as C and I existed, for Drawbaugh would have taken them out and exhibited them and talked through them, as they require no preparation, no arrangement of battery, and no difficult adjustment, but were always ready, — if they were in any sense practical instruments, as the defendants must contend.

Again, this witness says that he saw a dial telegraph there. The date of that instrument is not perfectly fixed, but it is very clear that it did not exist in the spring or summer of 1872. Drawbaugh (pp. 988, 999) on cross-examination described this dial telegraph, and says that he does not remember when he made it with certainty. The only circumstance he can think of at first was that it was before the Axle Company came, but he did not know how long; the Axle Company came in the spring of 1875. He adds (defts, ii, 989) : —

"*X Q.* 1067. Was it constructed after you made the transmitting apparatus for signalling which you have previously described?
"*A.* Yes, sir."

He, as usual, was not able to say exactly when he had constructed the signalling apparatus, but states (cross-ans. 1041) that it was between 1871 and 1874 that he constructed the first one, but that the one which he particularly described was constructed after that. The

other evidence, however, in the case leaves it very clear that the first telegraph key or magneto signaller was not constructed until the summer of 1873 at least. See the evidence as to its date in the body of this brief.

Their date so rests upon a supposed association that, when it is once proved to be wrong, there is no other time to attach it to.

No. 79. *James A. Smith*, p. 541. — Was miller at Eberly's Mills from March, 1866, to the fall of 1867. Says that Drawbaugh told him that the time would come when people could talk to a distance; that he was experimenting, and that he and his daughter Emmie had talked over it with the floor and two partitions between them, but the witness never saw one of the machines. Afterwards, but at some time not fixed, he was at Drawbaugh's shop, and Drawbaugh told him he had the machine all right. That was the last time he visited the shop. On a subsequent occasion he says that he visited the shop, and that Drawbaugh said to him (ans. 12): —

"'Hang it!' if he only could get somebody to assist him, in the way of money he meant; but he was not able to carry it through himself; he said that men were afraid to risk any money in a thing that had a patent right about it; he said, if some person would lend him money, he could make a good thing for himself and the one who would assist him."

Here is a valuable piece of hearsay testimony, that Drawbaugh, before the spring of 1867, did actually talk by means of his alleged talking machine. We know as a certain fact that he did not and could not; the earliest instruments produced would not, and we have the positive testimony of his nephew, Harmon Drawbaugh, called for the defendants, that up to the beginning of 1870 it was absolutely impossible for them to do it (see H. K. Drawbaugh, p. 173, *infra*).

No. 80. *C. S. Clendennin*, p. 544. — Shoemaker. Has lived at Eberly's Mills since September, 1878. Thinks he heard talk through P in November, 1878. Of course this is totally immaterial, as that was after Mr. Bell's instruments had been two years patented and eighteen months in extensive commercial use. The witness then says that he did shoemaking work for Drawbaugh's family, and that

Drawbaugh didn't pay him promptly, alleging that he was short of funds, but he does not pretend that he ever had the slightest hesitation in trusting Drawbaugh.

No. 81. *Edgar W. Chellis*, p. 547. — Harrisburg; store keeper. This man has an important relation to the case. He is a large stockholder and a director in the corporation defendant. He is also an individual defendant. He is one of the group, who, in May, 1880, acquired Drawbaugh's pretensions for nothing, and without agreeing to spend anything, and in June, 1880, for a substantial sum of cash, and an amount of stock so large that he refuses to state it, sold those pretensions to the corporation defendant, through certain persons who with him at once proceeded to represent those pretensions by a share capital of five millions of dollars. His deposition is as follows: —

In the spring of 1878, Johnson Leonard was exhibiting Drawbaugh's electric clock at Harrisburg, and introduced Drawbaugh to Chellis. Afterwards the defendants' witness, Dr. Moffitt (p. 143, *supra*), brought Drawbaugh to Chellis's store with a wooden model of a faucet and wanted Chellis to purchase a third interest, Moffitt proposing to purchase the other third (Chellis, ans. 1, p. 547). That was in November or December, 1878, — the witness thinks in December. Upon asking Drawbaugh his lowest price, the reply was that he must have $250, as he was in debt, and parties were pressing him for money that he owed. The witness gave Drawbaugh a check for $250, Jan. 7, 1879. He went into the faucet business then with Drawbaugh and Moffitt, and has carried on that business ever since at Drawbaugh's shop at Eberly's Mills. The witness then testifies (p. 547): —

"*Q.* 7. State what you know about Drawbaugh's financial condition from the time when you first became acquainted with him down to the summer of 1880, giving any circumstances or facts that may tend to throw light upon it.

"*Ans.* He was generally very poor and hard pressed for money. I advanced him a great deal of money during that time; it was in sums ranging from twenty-five cents to twenty-five dollars, which was for the support of his family, — for necessaries."

This is an answer substantially untrue, and the Court cannot doubt

that it was colored on purpose. It represents that the advances between January, 1879, and the summer of 1880 were in small sums for necessaries for the support of his family. The fact is that in April, 1879, Drawbaugh, who owned a house at Mechanicsburg, bought three years before, had a remaining mortgage or judgment lien on it, given for part of the purchase money, for about $250. He was not in the least pressed for money about it, if we can believe the creditor, afterwards called by the defence (Wise, defts, surbtl, 941, x-ans. 116). Chellis took a mortgage for the amount advanced, and also took an assignment of the lien. This appears in the testimony of Drawbaugh (ans. 606, defts, ii, 898), and on the judgment docket (defts, exhibits, pp. 58, 59). It was the first lien for about $250 on a house at Mechanicsburg worth $1,700.

As that transaction was only two years before Chellis testified, he could not have forgotten it, and when, in answer to a question asking him to give any circumstances or facts throwing light on Drawbaugh's condition, he testified that his advances were in small sums and for necessaries for his family, he presented the Court, for the purpose of supporting the theory of poverty, — all that he was called for, — a picture which he knew was a false one.

The witness testified on cross-examination that the bargain he made about going into the faucet business was that Drawbaugh was to be supplied with material and the money for patenting, but was to contribute his own services without any pay at all, and was to rely on ultimate success and have merely a share of the profits. Here is another of these fortunate instances where this man, in such poverty, so it is alleged, that he could hardly find food for his family from day to day, was perfectly willing to go into an enterprise which he knew, as will afterwards appear, involved an interference in the Patent Office, and could not bring any results for a long time, — perfectly willing and able to go on and work, and trust to the future for his pay, whether he had cash in his pocket or not. It is folly to deny that he had, and that he knew he had credit and resources of some kind which would enable him to work for a long time on the chance of pay at the end. A man who could do that could have found money to patent the telephone, or could have found a way to make a dozen instruments for sale.

It will be remembered that Chellis had as his partner Dr. Moffitt, who pretends to have had personal knowledge of the existence of admirable speaking telephones at Drawbaugh's shop in 1872, and that Chellis and Moffitt had discussed the advisability of going into the telephone business with Drawbaugh before they embarked in the faucet business, and concluded, on such knowledge as they then possessed, that Drawbaugh could not antedate Bell. (See Moffitt, p. 144, *supra*.) When Chellis therefore embarked in the faucet business he had considered the question of Drawbaugh's invention *with full knowledge of all that one of his apparently most important witnesses knew on the subject*. Now, after that, and with all this knowledge, his state of mind was expressed in the following portions of his deposition (p. 548) : —

"*Q*. 11. During your early connection with the faucet business, did or did not Mr. Drawbaugh urge you to go in with him in the telephone invention?

"*Ans*. Yes, sir, repeatedly.

"*Q*. 12. Why did you not?

"*Ans*. Because I was interested in the faucet and motor business, and wished to push them, and I did not think we could do much with the telephone, as Bell had a patent, and I did not know that he could antedate them.

"*Q*. 13. During any of your early conversations with Mr. Drawbaugh on the subject, did you say anything to him about Bell's patent and claim of priority over all others?

"*Ans*. Yes, sir; and I advised him to drop it,—the telephone,—as he could not antedate Bell. He said he did not know about that; that he had been working on it a good while; it was his way of expressing himself, when I would say you can't antedate Bell, he would say, 'I don't know about that, I have been working at it a good while.'

"*Q*. 14. What duties did Mr. Drawbaugh undertake to perform in connection with the faucet business in your arrangement with him?

"*Ans*. He was to devote his whole time and energies to the manufacture of the faucets and motors?

"*Q*. 15. What did you ascertain about the employment of his time and energies, as you began to get into the faucet business?

"*Ans*. I found out that while I was working with him, making patterns for the faucet, that he worked very well. I would come home in the afternoon and leave work for him to finish and have ready for the next day, and I generally found it on my return just about as I had left it.

"*Q*. 16. Did you discover that something besides faucets was

engaging his mind and attention; if so, what, and how soon did you discover it?

"*Ans.* I was talking to his wife in regard to it, that is, how slow we were getting along. She says, 'Mr. Chellis, Dan works at the telephone as soon as you go away, and most every night does not get home until twelve or one o'clock'; and she said that she had been talking to him about it, and wanted him to lay the telephone aside and work on the patterns, and give the telephone up, and he said that he would go to the poorhouse before he would give up working on it.

"*Q.* 17. What plan did you adopt, if any, at that time, to get him to work more steadily on the patterns?

"*Ans.* I told him (we were in the shop), 'Dan, we will hurry up and get through with these patterns, and we will look into this telephone, and I will go in with you.' This seemed to please him, and he talked telephone all the balance of the day, but did not do much, if any, work.

"*Q.* 18. Did you mean what you said, or was it only a little stratagem to get him to finish the patterns?

"*Ans.* I was just using that so as to get him to finish the patterns, and did not really have much purpose of going in with him.

"*Q.* 19. After the patterns were finished, did he continue to urge you to go in with him on the telephone, or not?

"*Ans.* Yes, sir.

"*Q.* 20. Did you finally consult counsel about the matter; if so, whom and when?

"*Ans.* I did; but before that, in fact, I was complaining to some one who came there in the shop, — I think it was Mr. Shank, but am not certain, — in regard to Dan neglecting his work on the patterns. I said I wished I knew how long he had been at work on the telephone; I then could form some idea how long it was going to take to get it out of his head; this party answered, saying he remembered talking through it in 1870. That is why I consulted counsel. I consulted Mr. Jacobs and Mr. Hill; it was late in the summer, I think, of 1879.

"*Q.* 21. Did Mr. Hill come here at your request to investigate the matter?

"*Ans.* Yes, sir.

"*Q.* 22. Did he encourage you and Mr. Drawbaugh to prosecute Drawbaugh's claim for the patent, and, if not, on what grounds did he discourage you?

"*Ans.* I took Mr. Hill over to visit Mr. Drawbaugh, and Mr. Drawbaugh showed him the telephones and explained them to him; but Mr. Hill said it would cost a hundred thousand dollars to fight the Bell Company; he considered Mr. Drawbaugh the original inventor, but advised us not to go into it unless we were prepared to raise a hundred thousand dollars to fight the existing companies."

The investigation by Mr. Hill appears to have been made in the latter part of the summer of 1879. Subsequently, in the spring of 1880, Drawbaugh was induced to assign his alleged claims and pretensions to four persons, namely, himself, Chellis, Mr. Hill, now counsel for the defendants and in charge of this case, and Mr. Jacobs, of Harrisburg, now counsel for the defendants and assisting Mr. Hill in the preparation of the case. We go into the consideration of the matter therefore with the fact that these three persons, the originators of the present enterprise, the persons by and through whom and under whom all the defendants claim, allege that they investigated the matter of Drawbaugh's claim in 1879, and then deliberately did nothing about it, neither published it nor asserted it, and for a year did not make it known to any one interested in the telephone business nor to the public at large. The complainants alleged in terms in their bill, sworn to by them, that those claims were not made known to them or the public, and were withheld; and the newspaper extracts which they introduce, with the failure of the defence to show any assertion made to the public that Drawbaugh was entitled to claim this invention at any time before the summer of 1880, is conclusive evidence that they did deliberately keep silent on the subject. Considering the activity in the telephone business at that time and the changes in the position of parties which were going on every day, such deliberate delay and silence would, in a court of equity, bar these persons from asserting any claim against individuals or the community; and would not only bar them from asserting any claim, but are enough to give rise to the presumption which the Court always feels the weight of in such a case, that they or those under whom they act did not make the claim because they did not believe it worth making.

This witness is one of the persons who first produced Drawbaugh to the world as the inventor of the speaking telephone, and on cross-examination he was inquired of about the origin of the defendants' scheme to set up Drawbaugh as a prior inventor. It was difficult to extract anything from him, because, although the occurrences were only a year old, he suffered from a serious loss of memory on the subject. On the second day, however, his recollection appeared to have somewhat revived, and he got on a little better. The result

was that he stated that he, Mr. Jacobs and Mr. Hill acquired each one fourth of Drawbaugh's pretensions on May 6, 1880, leaving, of course, as afterwards appeared from Drawbaugh's deposition, a quarter with Drawbaugh. These three originators, Hill, Jacobs and Chellis, did not expend and it does not now appear that they ever intended to expend a cent of money themselves (x-ans. 64, p. 554). The agreement between them and Drawbaugh was that each was to take a quarter of the proceeds; but they paid him nothing for their three-quarters' interest. Exactly how soon they began to negotiate with Wolf, Marx and others, persons who came in at the next stage, does not precisely appear; but Chellis states that Wolf was in Harrisburg on the subject as early as May 24; that is, eighteen days after Hill, Jacobs and Chellis acquired their interest. June 22, 1880, a conditional sale was made to Wolf and others, and July 20, 1880, the title to whatever Drawbaugh might have done or might claim was conveyed to Marx, Loth and Wolf and Klemm by direction of Drawbaugh, Hill, Jacobs and Chellis; the deed is printed in complainants' proofs, vol. i, p. 101.

The witness professes to be quite ignorant of how it happened that Wolf, Loth, Marx and Klemm discovered Drawbaugh so soon after he and his associates had acquired their three quarters of Drawbaugh's interest for nothing, and had not discovered him before; but surprise at that is somewhat diminished by the fact that Mr. Wolf resided in Washington, and that Mr. Hill, one of the three, also resided there. Neither Mr. Hill nor Mr. Jacobs, nor Messrs. Loth, Wolf, Marx, Klemm or any officer of the Peoples' Telephone and Telegraph Company, has been put upon the witness stand, except Chellis. The sale made by the first set of four persons, Chellis, Jacobs, Hill and Drawbaugh, to Marx, Loth, Wolf and Klemm, was a sale of Drawbaugh's pretensions for $20,000 in cash and an amount of stock which they refuse to state, except to say that it was considerable. The origin of the Peoples' Telephone Company, therefore, was that these three gentlemen got three quarters of this defence from Drawbaugh for nothing, without risking or intending to risk a dollar in it, and immediately turned it over for a large amount of money and stock to the principal defendants; and two of the first three became counsel for the corporation. That corporation was shortly

formed with a capital of $5,000,000, and it does not appear, either positively or inferentially, that they had anything to represent this capital except the Drawbaugh pretensions, three quarters of which had just been transferred for nothing, — and whatever money they might raise to carry on litigation.

The purpose and intent with which Wolf and his associates bought is proved by the defendants themselves, when driven to it, upon the redirect examination of Chellis. In their answer they put themselves forward as the assignees of Drawbaugh, asserting (paragraph 13, p. 8) that by reason of his pretensions they have a right to use speaking telephones "embodying the inventions, discoveries and improvements of said Drawbaugh," and in the next paragraph they say that they have in good faith, and relying upon their said legal rights, caused applications for patents to be be made in the name of Drawbaugh. It now turns out that they did not have the slightest desire to use any of Drawbaugh's inventions. They had a telephone of their own which, upon taking the advice of counsel, they apparently concluded was an infringement of the Bell patent, and they were searching for a defence. They bought up Drawbaugh, not because they imagined that he had a telephone that anybody wanted, but because they thought he could give a deposition for them. Mr. Hill, one of the four gentlemen in the case and the defendants' leading counsel, put to Chellis on redirect examination the following question and obtained the following answers. The questions of course are the statements of defendants' counsel, a party in interest, who had personal knowledge of the matter (Chellis, p. 559) : —

"*Q.* 106. When Mr. Wolf first came to you to negotiate for the purchase of the Drawbaugh invention, did he or not tell you that he represented a party who had already purchased the telephone inventions of Klemm and Tisdel, and were purposing to enter upon their manufacture and sale, and that they expected trouble with the Bell Telephone Company, who claimed to monopolize electric telephones of all kinds, and that they had already fully determined to test the validity and scope of the Bell patents, and the question whether the Klemm and Tisdel telephones were infringements thereof; what, if any, statements did he make on those several points?

"*Ans.* He did state something to that effect; it was in Mr. Jacobs's room at the hotel. I can't remember the exact words he said; it was to the effect that they wanted to use it in evidence against the Bell

Company; I mean they wished to use the Drawbaugh invention in evidence against the Bell Company.

"*Q.* 107. Did he or not state that he had been advised that a patent might yet be granted upon the Drawbaugh invention, and that unless they purchased the invention, the Bell Company might themselves purchase it, if they found their suit likely to be defeated by it, and might then get a patent on it themselves, which they could use against Mr. Wolf and his associates?

"*Ans.* Something to that effect, but I cannot remember the exact words."

It is perhaps rather instructive to bear in mind that when this controversy arose Chellis was Drawbaugh's partner and backer, the man and the only man who furnished him with money, held a mortgage and a judgment lien on his house, was his creditor for a year or two's supplies; in other words, had that complete and entire control over him which such circumstances give rise to.

Another matter was gone into somewhat in Chellis's cross-examination. The defendants from the outset have indulged in a great deal of newspaper warfare. In another part of this brief some of this is commented on, but there was one portion of it which has a bearing on the evidence in this case, and which the Court should notice here. The testimony was taken in Harrisburg; the witnesses came from that neighborhood; it was a matter which excited interest among Drawbaugh's acquaintances and in Cumberland County. From the class of witnesses who were called by the defence and the number who were called, it is evident that an artificial creation of a public feeling in favor of Drawbaugh — the creation of an impression in his favor, that Drawbaugh was sure to win — would greatly assist him in getting witnesses to testify, would fortify the weak and the doubtful, and would greatly embarrass the complainants, strangers to that community, from obtaining proof. The complainants expected to have, and have had, a great deal of what in a sense would be called negative proof, — the testimony of men who must have known of the thing if it existed, and who are sure they did not know it. The creation of an artificial public opinion that Drawbaugh was sure to win tended to make it almost impossible to obtain such witnesses from his acquaintances, and of course no one else would have the requisite intimacy or knowledge. On the other

hand, it must be said that the obtaining of so large a number of such witnesses as the complainants have produced, in spite of such attempt to create a public opinion in his favor, enhances their value very much.

Now, from the beginning of the time when the testimony began to be taken at Harrisburg, there appeared at frequent intervals paragraphs in one of the local newspapers, the *Harrisburg Independent*, describing, or rather misdescribing, the testimony in the case, and asserting that Drawbaugh was in the right and sure to win (see the articles complts, exhibits, iv, 463). It appears from Chellis's cross-examination, from the introduction of a copy of the newspaper itself (complts, ii, 1086; complts, exhibits, iv, 476), that Chellis was the largest advertiser in that paper (he carries on a ninety-nine cent store at Harrisburg); that the defendants had their record of 1400 pages printed at the job office of that newspaper. It cannot be doubted under these circumstances that the publications in that paper were written at the procurement, more or less direct, of Mr. Chellis and some of his associates. It is not, therefore, simply the case of a publication intended to affect the stock market, which the Court might refuse to pay any attention to, but these were a series of publications directly calculated if not intended to assist the defendants in procuring witnesses, and to hinder and embarrass the complainants. There was a great professsion in the redirect examination of Chellis that the defendants were grieved at these publications; and Mr. Chellis states that he always refused to give any information to any of the newspapers. Considering that he was one of the principal supporters of this newspaper, and the amount of money that he and the defendants paid to it for advertising and printing, nobody can doubt that the publications would have stopped if they had wanted to stop them. *They contain information which could not have been obtained from a stranger to the case.* The falsity of these professions is exposed by a subsequent transaction.

The deposition of Mr. Chellis was in July, 1881. In the following winter there appeared a long article in the Harrisburg and Philadelphia papers; it was written by a newspaper reporter in Harrisburg, and he testified that he obtained that information from Mr. Jacobs

personally at Mr. Jacobs's office, in the course of a long evening's conversation at an interview expressly appointed and arranged beforehand by Mr. Jacobs. The first interview for this purpose was appointed and arranged just about at the time Chellis testified. The article was not written then on account of some accidental delays. The article is printed in the complainants' exhibit, vol. iv, p. 470, and was printed and published while the defendants were still taking testimony and before the complainants had begun to take theirs.

Chellis was called upon to state something about the instruments which he saw at Drawbaugh's shop. The only material part is that he says that he thinks that J was made after he went there, and he did not go there until the beginning of 1879.

No. 82. *Michael Dellinger*, p. 560. — Says he went to Drawbaugh's shop in November, 1877, and saw A, D and H; that Drawbaugh did not talk through them or offer to; thinks there were other machines there. He was with his brother, William S. Dellinger, the miller at Eberly's Mills. Now William S. says that he saw there several times an instrument with a bell on it, but it was not H.

No. 83. *Henry Dellinger*, p. 562. — Says that he was at Drawbaugh's shop in 1876, but heard nothing of any talking machine. In June, 1877, was there again with his brother William.

No. 84. *John Dellinger*, p. 565. — Was with them. They do not agree as to what instruments they saw. William, who of course knows more about it than the others, because he was continually at the shop, is sure that he did not see H until 1879, and that it was not there in 1877; while two brothers, called later in the case, when it is rather desirable to get over that difficulty, are quite sure that they, from merely a single visit, can well remember it. Henry says he saw F, H, G, L, B. John says he saw M, B, H. William did not see H; and these three were there together in June, 1877.

No. 85. *Jeremiah Kohler*, p. 566. — Age, forty-five; miller; lives at Bridgeport; has known Drawbaugh eighteen years; lived at Eberly's Mills from April, 1873, to April, 1874. Says that while he

lived there he saw A, B, C and F. Drawbaugh was making A then. On cross-examination (p. 569) says he has been at Drawbaugh's shop since. A when first seen was in the same condition as now; has seen all these instruments at Drawbaugh's shop since. It is perfectly certain that this is untrue, for there is no pretence that anything like A existed before April, 1874. The witness Wesley Smith (p. 25, *supra*) swears that he saw Drawbaugh making it in November, 1874; W. S. Dellinger (p. 127 *supra*) swears that he saw Drawbaugh finishing the brass bracket of it after March, 1876; and various questions put by the defendants assume and admit that they do not even claim that it was made before the fall of 1874. These are collected in connection with the description of A in the body of the brief. The *defendants* tried to get help on this from Drawbaugh, but he would only say that he did not know when he made it, and would not positively swear that Kohler was wrong (Drawbaugh, defts, ii, 823).

No. 86. *Charles H. Matthias*, p. 570.— York County. Says that he was at Drawbaugh's shop in 1877, and saw some talking machines, and heard with one machine; says that he saw H, or one like it; that he listened at one like E; thinks he saw G and O; he was also at Drawbaugh's shop in 1878. William Dellinger took him to Drawbaugh's to see the talking machine, and he saw the clock and the telephone. Drawbaugh then called it a telephone. Drawbaugh said he had it all complete, and would like to patent it, but was too poor. Matthias says that he became assignee of Dellinger when he failed. Dellinger, No. 59, p. 123 *supra*, says that his firm failed in 1879 (ans. 78, p. 466); Matthias therefore was a frequenter of Milltown, particularly in 1879, and the earlier date alleged for his visit rests merely on memory. This is very significant, considering that Dellinger's testimony is that he saw H in 1879, but did not see it before that; and that the instrument he saw with the bell on before that time was not H. There is a statement in this witness's testimony which is either untrue or else puts Drawbaugh in a very unfavorable light. It is a representation (x-ans. 26, p. 572) that Drawbaugh stated that he had got a speaking telephone and wanted to patent it. Now if what he had got and wanted to patent was an *improvement*

on telephones, that would have been a reasonable remark to make, but for him to suggest to anybody that he would like to get a patent on the telephone in 1877 or 1878, and that nothing but his poverty prevented, when he knew that they had been a year or two in public use as the invention of another man, is something which cannot be believed without destroying his character. Put this along with the fact that the only claim that ever got upon paper as coming from him before the institution of this suit was a claim that he had made *improvements* in the telephone after other people had known of it, this testimony can be understood.

No. 87. *Harmon K. Drawbaugh*, p. 573. — Age, thirty-three; machinist. This witness is a son of Squire John B. Drawbaugh, and a nephew of the claimant, and a very conspicuous witness.

His opportunities for knowledge. Out of nearly four hundred witnesses called by the defence, he is one of the only five who even pretend ever to have actually assisted the claimant in any experiment on talking machines, unless it be by a single use for a few minutes. The five are No. 24, H. C. Springer; No. 49, E. R. Holsinger; No. 55, H. F. Drawbaugh; No. 87, H. K. Drawbaugh; and No. 90, J. B. Drawbaugh.

He lived most of his life in the village of Milltown, and in his father's house next to Drawbaugh. From the spring of 1868 to the spring of 1869, he worked almost continuously for the Faucet Company in Drawbaugh's shop. (See defendants' witness, W. L. Gorgas, book-keeper of Faucet Company, producing their books; x-ans. 45, defts, i, 685.) During "several months" before January, 1870, he was in Missouri (ans. 4, 5, p. 574); in the early part of 1870 he began to be about the shop again. "In the spring of 1872," he went to Waynesboro to work; prior to that "he was about the shop then a great deal" (ans. 14, 15, p. 575). He was at Waynesboro "several months" (ans. 24, p. 576), then went to the car shops at Harrisburg till the fall of 1873 (ans. 26), and worked with and part of the time roomed with the complainants' witness, Jacob Carnes (complts, ii, 888). "In the fall of 1872 and spring of 1873 was at Drawbaugh's shop quite frequently" (ans. 27). From the spring of 1873 till the fall of 1874, "I was back and forward [at

the shop], but not so often. I got some little work done there for my mill [a sawmill he had bought], and done some myself, — went there and done it" (ans. 28). "In the fall of 1874 commenced to assist his uncle Daniel in his shop" (ans. 25). He appears to have been occupied in the shop, or at least to have frequented it during the winter of 1874–5, and March 29, 1875, began work for the Axle Company (ans. 37, p. 578; ans. 163, p. 596). He worked for the company, according to his own story, most of the time until about May, 1876, and though his testimony is wrong on this point, and some of the errors are material in connection with other facts, yet it appears from the acount books of the Axle Company, produced by the defendants' witness, Capt. Moore (defts, i, 646), that he was paid by them for about two hundred days' work during this time.

Considering his relationship and his opportunity, the testimony of this witness must be taken as presenting the strongest story which the defendants could pretend to ask the Court to believe, even if there were no proof to the contrary in the complainants' record and from the positive and undisputed facts of Drawbaugh's history, surroundings and actual course of conduct.

The deposition of this witness is chiefly devoted to three matters: the instruments he says he saw, tried or worked upon; the results which he says were produced from them; the lines and circuits on which they were from time to time experimentally used. His deposition, taken in connection with certain record facts, does not make out a case for the defence; and, what is equally important, his deposition, if true, is inconsistent with and destructive of the story told by a considerable number of the casual visitors to the shop whom the defence have called as witnesses. The Court must of course discard the testimony of the others as untrue. But that is not the chief consideration. Where the story told by him and the story told by them — all witnesses for the defence — are inconsistent, not in details but in matters material, and introduced because they are material to the case, will the Court weigh one set of the defendants' witnesses against another set? If it finds that the balance of the defendants' proof leans to one or the other of two inconsistent stories, will it take this net result, so to speak, as the

defendants' story? And if it does, how much value will it give to such a tangled residuum or proved doubt to sustain the burden against the complainants' proofs and make out that case free from doubt which the defendants are bound to make out?

We insist that where the defendants' own witnesses raise an irreconcilable conflict, the Court must say that, *as a whole*, they afford no reliable basis for judicial action.

Without admitting the truth of either of these stories, we proceed to state them.

The story told by the claimant and attempted to be sustained by a considerable number of his witnesses is this: —

In 1867 he made F and B, and before 1870 he transmitted through them, without trouble and with perfect intelligibility, whole sentences and newspaper advertisements (Daniel Drawburgh, ans. 178, defts, ii, 810). Before 1870 this success, so they allege, was noised abroad, and was common talk in Milltown and in many places miles away. He never made but one tumbler instrument (D. Drawbaugh, ans. 142, defts, ii, 803).

They say that these two instruments were followed about 1870 by C and I, which they allege — and this is true — were far better, — better when used together than F and B were, and each of them better as a receiver when used with F than B was; so that it is certain that a man having these instruments would at least never use B.

Then, in the last half of 1874, so they allege, came A, an improved receiver. Then in the early part of 1875 they say came D and E, which both, as transmitters and receivers, far surpassed those previously named.

But upon these points the story testified to by Harmon K. Drawbaugh is as follows: —

F and B. He says that in the fall of 1868 Daniel Drawbaugh told him about sound vibrations, and that they would vibrate a plate one inch thick; that about January, 1870, he first showed him his talking machine. What he then saw were F and B; "think" I saw F before I went to Missouri, in the fall of 1869, but "am not positive" (ans. 6, p. 574); one end of B had a bladder on and a crossbar of iron in front of the electro-magnet; the other end had a funnel of paper; he used plumbago in F; on the rod which projects from the cover of F he had a nut for adjustment.

Now for results (p. 575) : —

"*Q.* 11. Did he talk to you, or did you talk through those machines F and B at that time, early in 1870?

"*A.* No, sir; *not in words, not at that time.* He used to get me to make sounds, at that time, sounds that he thought had more force or more vibration, to move the instrument clearly. I remember very distinctly of playing the violin in it.

"*Q.* 12. How soon after that did he talk to you through the instrument, if at all?

"*Ans.* A very short time afterwards; there were *some words* that we could understand only."

Witness then says that in the spring of 1872 he went to Waynesboro.

"*Q.* 15. Prior to your going to Waynesboro to work, did you talk much or hear him talk much through the instruments?

"*Ans.* Yes, sir: I was about the shop then a great deal.

"*Q.* 16. Were the instruments in such condition prior to your going to said Waynesboro that you could hear and understand all that was said through them or not?

"*Ans.* *Just for a little while at a time; they appeared to require a great deal of adjusting and working at, — merely trials that he got me to help him.*"

He also says that his uncle tried clay and prepared iron filings in F, but does not remember that he used pulverized stone; this was "from the latter part of 1874 until 1876" (ans. 79, p. 584).

Now considering the position of this witness, and that he worked for the Faucet Company a year (1868–9), this testimony is fatal to any possible belief in the notion that the claimant had practical speaking telephones before 1870, or in the beginning of 1870; it is fatal to the belief that the existence of such instruments in his shop in 1869 was a fact known and matter of common talk in the community, it absolutely disposes of all the ignorant casual witnesses or bystanders, who, by hearsay or direct testimony, pretend to the existence of such an instrument as that time; *it absolutely disposes of the statement in Drawbaugh's own deposition* (*ans.* 178, *p.* 810) *that before that time his instrument talked well, and he used to read newspaper advertisements through it.* Again, in the spring of 1872, and prior to that, witness was at the shop a great deal, and the best

that he says about the instruments is, that just for a little while at a time something could be got through, and they appeared to require a great deal of adjusting and working on; and all this merely by way of private trials. What then becomes of the casual visitors who heard continued sentences without difficulty through F and B in and before the early part of 1872?

This is the best that he has to say of results produced by F and B during all his experience. Now that, coming from a relation, testifying merely from memory, set against the worthlessness even of improved forms of F and B as shown by the New York tests and against all the facts of Drawbaugh's history and of this case, would not be enough, even if the Court had entire confidence in his intelligence, integrity and general accuracy, to make out a defence. He adds only one more statement about F and B (p. 583): —

"*Q.* 70. Prior to the time when your uncle made the magneto instruments D and E about the beginning of 1875, how many tumbler instruments like F had you seen at his shop?

"*Ans.* He had *several* sitting around there.

"*Q.* 71. How many had the bottom broken off or removed, like the instrument F?

"*Ans.* I don't remember more than that one.

"*Q.* 72. Do you have any recollection of an instrument which he made at a very early day in which he used a cup instead of a tumbler?

"*Ans.* No, sir, I do not; there were a great many cups and tumblers sitting around there that he really used, but I can't just remember the time; I remember of cups being there."

On the other hand, the claimant testifies (defts, ii, 803): —

"*Q.* 141. In Exhibit F drawing and in the machine Exhibit F I observe that the tumbler there shown has no bottom to it, the bottom having been broken off or removed: did you have a tumbler instrument in which the tumbler had no bottom among your original tumbler instruments?

"*Ans.* Yes, sir, I had; that is, after it became broken accidentally, I had still used it; I found that it would answer without having it dampened; that is, the later low conductor that I used could be used without being moistened, — in a dry state.

"*Q.* 142. Have you any recollection whether, in your tumbler transmitters, you always used the same identical tumbler, or whether you had different tumblers for the purpose?

"*Ans.* I can't remember of using *only the one;* I may have used more."

A pretty strong endeavor was made by defendants' counsel (p. 588) to get this witness to swear to an instrument in the form of "F reproduced" which is quite different in form from F; but the most that the witness would do was to say that he had some kind of an impression. It is very clear, however, that he does not in his mind distinguish it from the form F, and finally he says of F, "I can't remember just the connections or constructions any more" (ans. 114, p. 589).

C and I. If Daniel Drawbaugh's description of C and I, or if his statement of the results obtained with them as compared with F and D, or the results obtainable or with either of them used as a receiver when compared with B, it is certain that B, and almost equally certain that F never could have been used after they existed. He says that the best of them for use as a receiver was I. Now Harmon K. Drawbaugh does not mention I in his whole deposition: clearly he never saw it.

According to the claimant, C was chiefly a magneto transmitter, though usable as a receiver, and was the first one made; and yet all that Harmon has to say of it is the following (p. 576): —

"*Q.* 18. Please look at the machine marked C now shown you, and state whether you recollect seeing a machine there in his shop having the parts constructed like this instrument C.

"*Ans.* I remember of seeing it very well, but I really couldn't say when; I know it was a good while ago.

"*Q.* 19. Do you remember whether it was before you went to Waynesboro to work or not?

"*Ans.* My impression is that it was before I went to Waynesboro.

"*Q.* 20. Do you recollect whether you ever talked or heard anybody talk through instrument C?

"*Ans.* No, sir; I don't remember of ever trying to speak in it.

"*Q.* 21. Is the instrument C in the same condition as when you saw it at that early time, or were there other parts upon it at that time that are not now upon it?

"[*Objected to as leading.*]

"*Ans.* I think there was a magnet at the back of it, or what I supposed to be the back, — this tin here.

"*Q.* 22. Please look at the magnets as arranged upon the instrument, which is now shown you, and which, for the purpose of identification I now mark as 'C reproduced,' and state how the arrangement of the two magnets there compares with the arrangement of the magnet on instrument C as you recollect seeing it at that time.

"*Ans.* In my mind they are the same, with the exception of that horseshoe magnet; I don't remember of seeing that in that position. I saw a great many horseshoe magnets of different sizes hanging around in different parts of the shop with pieces of iron suspended to them.

"*Q.* 23. Do you remember the electro magnet at the back of the diaphragm on instrument C?

"*Ans.* Yes, sir; I remember of it looking as that does now."

The amount of this is that he casually saw it, but never in working condition, with the horseshoe magnet, — does not know when, — and never used it.

He never used or witnessed any use of A. His whole testimony about it is as follows (p. 577): —

"*Q.* 30. Please look at the instrument A, now shown you, and state when and where you first saw it.

"*Ans.* I saw it in that condition in the beginning of 1875, that I am positive of; I might have seen it when I first came there, but I am only positive of it in that condition in the beginning or about January, 1875.

"*Q.* 31. Before seeing it in its present condition, had you seen it in any other condition, if so, what other condition; in what condition was it when you first saw it?

"*Ans.* I don't know whether this is the one; it was one about this size and shape, with a magnet protruding at the bottom, and the mouthpiece being at the centre, where the adjusting screw now appears. I don't remember that adjusting screw being in it at that time. By adjusting screw I mean the thumb screw in the middle of the instrument, close to the mouthpiece.

"*Q.* 32. When you saw it about the beginning of 1875, was it then in its present condition or not?

"*Ans.* To the best of my recollection, it was in its present condition."

He then gives some important testimony about D and E, — the earliest instruments, according to the defendants' chronological schedule, which are capable of producing sufficient results to make out a defence.

Defendants' witness Holsinger asserts that he was continually at the shop experimenting with the claimant through 1874, 1875, 1876, and on *direct* examination he says (p. 379): —

"*Q.* 32. Did you see him [Daniel Drawbaugh] make the machines D and E?

"*Ans.* I did.

"*Q.* 33. Did you talk with him through those two machines while you lived there?

"*Ans.* Yes, sir.

"*Q.* 34. To the best of your recollection, about what time was it when you and Mr. Drawbaugh first experimented with those two machines D and E?

"*Ans.* About the middle of the summer of 1875.

"*Q.* 35. Did you and he, after you first saw those two machines D and E, experiment with them a good deal, or not much?

"*Ans.* Very frequently."

If this be taken alone and believed, it would fix the *first* production of D and E as in the "middle of the summer of 1875," and that *Daniel* Drawbaugh then made them.

On the other hand, three members of the Axle Company, covering the period from January, 1875, to midsummer, 1876, were called, but none of them pretend to have seen D and E (see No. 97, Moore; No. 101, Bear; No. 106, Grove).

Springer (24, p. 54, *supra*) positively fixes the first production of and E as not before midsummer of 1876.

Harmon Drawbaugh refers to D and E on pp. 579, 580 as if they had been completed about March 1, 1875, but his most important testimony about them is the following (p. 590):—

"*Q.* 117. At the time your uncle Daniel made the second small magneto instrument, in the beginning of 1875, did you do any work on it?

"*Ans.* Yes, sir; I done a good bit of work on it for him.

"*Q.* 118. Do you remember what you did on it?

"*Ans.* Yes, sir; my impression is I made the whole thing, very near all of it.

"*Q.* 119. Do you know which of the two instruments D and E you worked on?

"*Ans.* I worked on instrument D the most; I done some work on E too.

"*Q.* 120. Which is the one that was made before you went to work for him in January, 1875?

"*Ans.* This is the one I think (E) he made first; he first made them very temporary.

"*Q.* 121. What work did you do on the instrument E which was made before you went to work for him?

"*Ans.* The parts he had made he had made very roughly, and while he was making the wood parts of it he got me to make the other parts, so that, I might almost say I made the whole instru-

ment; he took it out of the case it had and made new walnut casing for it.

"*Q.* 122. Then the instrument was substantially made over again at that time, was it?

"[*Objected to as leading and incompetent.*]

"*Ans.* It was what I would term reproduced, in order to make it look more respectable.

"*Q.* 123. After it was so reproduced, did you immediately go to work on the other instrument D or not?

"*Ans.* Yes, sir; I went to work on it right away, or a very short time afterwards. I was working for him at that time.

"*Q.* 124. There is no cover over the bottom of instrument D: did it ever have one or not?

"*Ans.* I think it did.

"*Q.* 125. There is a small round hole in the bottom cover of instrument E and through the inner end of the curled magnet: what was that hole for?

"*Ans.* It was first intended for a screw; it had a screw in it at one time.

"*Q.* 126. In the same manner as D now has?

"*Ans.* Yes, sir; one like it.

"*Q.* 127. Did your uncle direct you in your work on those two instruments?

"*Ans.* Yes, sir; he merely made a small draft of it on a small piece of paper or envelope, — I forget now which, — and he would tell me from time to time while I was working at it how he wanted it, and I would ask him about it.

"*Q.* 128. Do you recollect whether there was any particular design in not making the instruments exactly the same shape?

"*Ans.* I remember of there being a difference in the machines, but I could not tell to exactness the difference in the measurements or anything of that kind any more. I don't whether there was a design in making them different or not; I remember of him telling me, but I could not just tell you any more.

"*Q.* 129. With the exception of the removal of the bottom screw from one and the bottom cover from the other, are those two instruments D and E in the same condition now that they were in when first finished, in the early part of 1875, or have they been changed in any way?

"*Ans.* They have not been changed in any way that I can see.

"*Q.* 130. I want to know whether you could or could not, from your own unaided memory, and without having either of the machines D and E before you, have reproduced substantially similar machines at any time from January or February, 1875, down to the present time?

[*Objected to as incompetent.*]

"*Ans.* I could have, except in size or calibre. I don't suppose I

could have got them exactly the sizes of those. I would have had to make them entirely from my memory of the work on those. I did everything except put the insulated wire on; I did not do that.

"*Q.* 131. Who made the curled magnets for those two machines, if you know?

"*Ans.* He made the one for the first one and forged it and shaped it, and I made the other, I think; there were several, — quite a number of them made; and I know that Fettrow made a couple, but I don't know which of them were used."

There had been an endeavor to get this witness to state that Drawbaugh had ruder forms of these instruments, but this answer disposes of that intimation, because, whenever this work was done, Drawbaugh would not have given directions by word of mouth and draughts, if he had a model, however rude, to work from.

Now comes the first approach to record evidence to fix the date of D and E. Harmon testifies explicitly in answer to int. 129 that they have not been changed in any way since they were first made.

Daniel Drawbaugh testifies to the same effect, referring particularly and in terms to the magnets, but admitting other changes slight and immaterial (direct answer 1700, defts, ii, 1107, quoted, p. 125, *supra*). That then is the defendants' assertion.

In Harmon Drawbaugh's ans. 131, just quoted, is the statement as plain as can be that Fettrow, the witness, "made a couple of magnets *for these instruments*," though he is not certain whether these or others were finally used. Now, if we can find out when Fettrow first made a couple of magnets which could have been used in these instruments, we shall have reached some definite knowledge. We can at least find out when Fettrow did *not* make them. In his deposition, p. 369, the defendants asked him for an account of everything he did for Drawbaugh from 1868 to April 1, 1876, the witness having stated that he kept an account in his book of everything he let Drawbaugh have. Fettrow's testimony upon this is as follows (p. 370): —

"*Q.* 66. Did you keep a book account showing what you let him have along from one year to another?

"*Ans.* Yes, sir.

"*Q.* 67. Have you the book here and will you produce it and show it to the examiner?

"*Ans.* Yes, sir.

"*Q.* 68. Please point out to the examiner, so that he can enter upon the record, the various items of money and other things that you let Mr. Drawbaugh or his family have and charged it on the rent account during those years that you rented the property from him.

"*Ans.* Here they are in the following pages: 19, 27, 35, in the first book, and 25, 50, 78, 115, 133, 157, in the second book.

"[*Mr. Hill requests the examiner to make and certify to the Court as Exhibit Fettrow Account an exact copy of the account between the witness and Mr. Drawbaugh, contained in the books here presented.*]"

These accounts are found in the respondents' book of exhibits, p. 1. There are minute details, — items of five and ten cents. Evidently they include everything. Not troubling ourselves to go back of the earliest date that anybody had pretended for anything about D and E, and remembering that the magnets upon them, being permanent magnets, necessarily must be of steel, we may examine the Fettrow account from April, 1874, to its end, April, 1876, pp. 9 and 10. *Throughout that whole time there is no charge in Fettrow's book for a magnet, and there is no charge even for a piece of steel, except one charge, Feb.* 14, 1875, *which in terms is for steel and iron for weaver's reaper.* It will be observed that this important answer of the witness Harmon Drawbaugh was given on direct examination in response to a question on that precise point. It is not a chance statement therefore, but the direct and intentional assertion on the part of the claimant that Fettrow made some magnets for D and E.

It appears to be one of the settled ideas of the defendants, not resting merely on the statements of this witness, that Fettrow did make the magnets for D and E: for the defendants' counsel, who examined Harmon Drawbaugh, and is himself one of the parties in interest, in cross-examining our witness, Mr. F. L. Pope, about D and E, said (complts, ii, 1450): —

"*Recross-Q.* 401. Assuming that Drawbaugh made the instrument D and E in the early part of 1875, and that he either made the permanent magnets himself *or employed the village blacksmith at Eberly's Mills to make them* for him, would you expect them to be made of tungsten steel, and would you not consider it highly probable that they would partially lose their magnetism in the course of seven years?"

It is certain from Fettrow's account that he did nothing of the kind before April 1, 1876, and there is no other proof as to the time when he made them.

The defendants have furnished the Court with some specific, decisive evidence about D and E which fits in with the foregoing. W. S. Dellinger (No. 59, p. 125, *supra*, defts, i, 459) first went to Milltown in March, 1876. Speaking merely from memory of dates, he says that he saw E (but not D) in March, 1876 (ans. 13, 14, p. 460), and defendants then carefully refrained from asking him when he saw D, or what he knew about it. But on cross-examination it turned out *that he saw D, and Daniel Drawbaugh making D after March*, 1876, *but he cannot tell when*. We refer the Court to the text of his answers, quoted on p. 125, *supra*. On a mere memory of a date he is disposed to swear to E in March, 1876, but the moment he comes to *facts* they are the other way.

D and E were the machines which must have made the greatest impression, because they were the first practical machines. Yet the Court can get no aid from the other members of the Drawbaugh family to fix their date. Henry F. Drawbaugh says on direct examination (p. 425) : —

" *Int.* 77. What is your best recollection as to the time when you first saw this machine D?

" *Ans.* My *impression* is that I seen it before I started running the cars; I could not tell what year; I recollect it by that curve."

Elsewhere the defendants got him to be a litttle more definite, but without success enough to control this specific answer. As to E, he expressly says that he cannot pretend to give any date, and does not know E, G, K, L, M, N, O, apart (pp. 424, 425).

J. B. Drawbaugh (p. 193, *infra*, defts, i, 611) and George W. Drawbaugh (p. 201, *infra*, defts, i, 628) can only say that at some time they think they saw D and E, but do not pretend ever to have used them.

Now, if there were nothing in the complainants' proofs or in Drawbaugh's history to show that he did *not* have D and E before Mr. Bell's patent of March 7, 1876, could the Court satisfy its mind from this testimony of the defence that he did then have them?

It proves of itself that they did *not* exist before midsummer of 1876.

The witness then gives one very instructive answer. There is no doubt that an alleged inventor, in order to defeat an existing patent, must show that he had constructed the apparatus and operated it commercially or else in such a way that the public, or some portion of the public, — that is, some one besides himself, — could have acquired sufficient knowledge to construct and operate similar instruments from the disclosure he made. The defendants, merely as a matter of evidence, must have appreciated the importance of some such proof, and the great difficulty they labored under in the case from the fact that they could show nothing of the kind. They called witness after witness, and of all who even pretend to a knowledge of Drawbaugh's instruments there are not more than one or two or three who had sufficient capacity to understand the nature of the operation which they perform, or even their mere mechanical construction. The witnesses were very often asked if they knew how the machines operated, but the most that any of them could say was that Drawbaugh told them they "worked by electricity." There is not throughout the whole case a single witness who pretends to have had any knowledge of the construction and operation of the instruments, from which he could have given the slightest idea to any one how to make them. The question put to this witness shows that they felt the importance of that, and they questioned him as follows (p. 591): —

"*Q.* 130. I want to know whether you could or could not, from your own unaided memory, and without having either of the machines D and E before you, have reproduced substantially similar machines at any time from January or February, 1875, down to the present time.

"[*Objected to as incompetent.*]

"*Ans.* I could have, except in size or calibre. I don't suppose I could have got them exactly the sizes of those; I would have had to make them entirely from my memory of the work on those. I did everything except put the insulated wire on; I did not do that."

The Court must take along then the fact that the defendants,

seeking to prove that some one besides Drawbaugh himself knew something of the construction of his alleged instrument, had not been able, in four years' time and out of four hundred witnesses called, to find anybody who would venture to swear anything whatever on the subject except this witness; under the circumstances, such testimony coming from a single person, a relative, presumably interested, is of course worthless. That they put in this testimony and none other on the subject is enough to show that no testimony the Court can look at exists.

The witness then went on to state that he always thought his uncle was poor, and that all the persons who came in contact with him manifested a great opposition to his working on the talking machine, and that the witness's father, Squire Drawbaugh, particularly objected; and then the witness testifies to the extent of the work that Daniel Drawbaugh performed on the talking machine. He says (p. 592): —

"*Q.* 137. From all you know of your uncle Daniel's work, of your own knowledge, from 1870 down to 1880, did he or did he not ever lay his talking-machine invention aside and give it up, or give up working upon it during that period?

"*Ans.* No, sir; I don't think he ever did. I have known him to work at other work during the day; I have known him then to work on his talking machine till eleven or twelve o'clock at night, and sometimes till two o'clock in the morning.

"*Q.* 138. From all you know by your own personal observation, what was it that principally engrossed his study and labor during that period, — from 1870 to 1880?

"*Ans.* I was under the same impression as nearly every one else that knew him, — that it was the talking machine."

"*X Q.* 144. When was it that you knew of your uncle Daniel working till midnight or later on his talking machine?

"*Ans.* It was during all the time that I was there, from 1870 till I went away in 1872, and then from when I came back in 1874 till I left in 1876.

"*X Q.* 145. Do you mean that he did it occasionally during that period, or that it was a pretty constant habit of his?

"*Ans.* It was a pretty constant habit of his; I might say that it was every night that he was well enough to go to the shop.

"*X Q.* 146. Were you ever there in the shop nights when he was working on the talking machine?

"*Ans.* Yes, sir, very often.

"*X Q.* 147. Did you ever meet anybody else there when he was working on the talking machine at night?

"*Ans.* Yes, sir; it was a kind of a loafing place for some of us young men; we would go there at night and play seven-up sometimes; then at different times I would meet men out of the village, just right around home, you might say."

This witness says that some time after June, 1879, his uncle for the first time mentioned the Bell telephone to him, and he said that he was away ahead of Bell; that if he had the means to go ahead he would have had it out first. This remark, however, was made after a controversy had been talked of, for it was when Chellis was considering whether he would go into the talking-machine business with Drawbaugh, and had concluded that he would not.

The defendants called on this witness to describe the wires and circuits arranged in the shop, and while there is in his testimony something of the same vagueness about facts and dates that is found in the claimant's deposition on this subject, still he leaves it clear that during the time which most of the defendants' witnesses profess to cover, the talking machine had not assumed importance enough for any wires to be put up for it; he testifies: —

P. 585. "*Q.* 81. — On what floor were they principally used?

"*Ans.* Counting the basement or cellar as a floor, there was generally one in the basement or cellar and the other on the third floor.

"*Q.* 82. How were the instruments in the cellar and on the third floor connected?

"*Ans.* By means of wires.

"*Q.* 83. How did those wires run in the shop, and how were they supported?

"*Ans.* They generally ran along the joists till they got to the wall or close to the wall; he generally run them down in a corner.

"*Q.* 84. Were those wires taken down and put up every time he wanted to use the talking machine, or did they remain permanently attached to the wall and joists?

"*Ans.* They were never taken down, to my recollection.

"*Q.* 85. When did you first see them up?

"*Ans.* I first saw them up, as I thought, permanently, in 1874. I have seen them changed some since, on account of making additional rooms in the shop, but not materially changed; have used other wires in different directions, taking them out of the shop, — I mean when he took the one instrument up the creek a short distance there for trial.

"*Q.* 86. Do you remember a line of wires run out at one time to or over the hill near the northwest end of the building?

"*Ans.* Yes, sir.

"*Q.* 87. Did you see any tests of the talking machine made on that last-mentioned line?

"*Ans.* No, sir, I did not; I remember of seeing the wires up, though.

"*Q.* 88. Referring to the wires which ran from the third story to the cellar or basement, when did you last see those wires up?

"*Ans.* I don't think I have seen them since 1879.

"*Q.* 89. Do you know whether they were taken down then, or whether they are up now?

"*Ans.* I do not. I have since that talked through telephones there that were in a different place, but I don't know whether those wires are there now or not.

"*Q.* 90. Referring to those wires that ran from the third story to the cellar, what if any use was ever made of them besides their use for the talking machine?

"*Ans.* I think they were used for running one of those clocks at one time.

"*Q.* 91. When was that?

"*Ans.* That was in 1871, I think, that the clock was first made, — the first one, to the best of my recollection; it might have been before that time.

"*Q.* 92. I understood you to say that you first saw that line of wires in 1874: does your recollection now go back to an earlier date for them?

"*Ans.* Yes, sir; in 1869 I remember of the big clock being bought from Mr. W. L. Gorgas while he was foreman of the shop, — it might have been in 1868, but I know that it was while he was foreman; I think he was foreman in 1868 and 1869. Daniel Drawbaugh ran his first electric clock from his large clock, and that was the time the wires were first put down to the earth, either in the cellar or outside of the shop.

"[*Adjourned until* 2 P. M. *for dinner.*]

"Examination of H. K. Drawbaugh resumed at 2 P. M. pursuant to adjournment.

"Present, same counsel.

"*Q.* 93. How long was that line of wires used for the electric clock, if you remember?

Ans. "I think they used it up to the present time, or until his present clocks were taken down; those, I think, were the first wires used.

"*Q.* 94. Did not the use of the wires for the talking machines interfere with their use for the clock?

"*Ans.* There was a small copper wire run from the talking machine to these wires; and my impression was that the clocks were disconnected from the wires at the time of the experiment or trial; since that time I know of him putting up other wires for the talking machine or telephone alone.

" unable to recognize any of them as the particular instruments that he saw Mr. Drawbaugh working upon."

This was not because he had forgotten what he saw, but *because he remembered it, and it was different from anything laid before the Court.* He testified (p. 598) : —

" *Q.* 5. When did you first know of Daniel Drawbaugh's talking machines?

" *Ans.* Nine years ago, about 1872.

" *Q.* 6. How came you to know about them at that time?

" *Ans.* I came to the shop there, and he showed me *a machine with tin tubes at each end,* and a wire wrapped with string."

This witness was not asked whether they would work by electricity; electricity was not mentioned in his deposition. Now that is as clear a statement of the common string telephone as can be. It is impossible that the witness, who came upon the stand and testified after previous conversation, should have stated that unless it was the fact. He was not asked for a description, and it is not unreasonable to suppose that no description was expected from him. Considering how much testimony in the case would be perfectly met by a string telephone, this deposition is very significant. It is evident that the defendants were a good deal disturbed at this; they did not dare to ask Ditlow further about it, so they got Drawbaugh to deny it (p. 902) : —

" *Q.* 637. David M. Ditlow has testified (defendants' printed record, p. 598) that about the year 1872 he went to your shop and you showed him and talked to him through a machine with tin tubes at each end, and a wire wrapped with string. You have not mentioned such machine in your testimony, if he has described it correctly: what if anything do you remember about it?

"*Ans.* I can't remember of ever having a machine of that description; I think he has reference to Exhibit B."

There is another thing that is very significant: the father of this David M. Ditlow was a man who appears to have had a good many dealings with Drawbaugh. His name was David Ditlow (Drawbaugh, x-ans. 1435, defts, ii, 1057), and at one time — about 1868 — he was so well satisfied with Drawbaugh's means that he did not hesitate to lend him $400. Drawbaugh, so it appears from his deposition (p. 879), went to see him while testifying, to find the dates

and the manner of payment of that note. (The date of the note was April 2, 1870, partly paid or renewed from time to time up to 1876 or 1877; see Drawbaugh, defts, ii, 881, 882.) And as David Ditlow had dealings with Drawbaugh before that in the way of money, and up to 1875 lived within half a mile of him, they must have been on pretty intimate terms, for Drawbaugh would go to him to borrow money. He was therefore just the man to whom Drawbaugh would have gone to for money, if he had had a practical speaking telephone. Now, although David Ditlow was in the neighborhood, so that Drawbaugh while testifying went to him for information about the note, they have not produced him as a witness nor excused his non-appearance. He is another important person who must be classed among those in Drawbaugh's immediate neighborhood, who would have known all about the alleged speaking telephone if it existed, who would have been appealed to advance money on it if it existed, and who knows nothing about it. Two other sons of David Ditlow — and brothers of this witness — have been called. One of them — Alfred Ditlow — was called by the defence upon a collateral matter (defts, surbtl, 820, and see abstract of his deposition, *infra*). He was not asked about telephones. Yet he married the daughter of John B. Drawbaugh (defts, surbtl, 447, 883). The other — George Ditlow — was called by the complainant's in rejoinder, and testified (complts, iii, 2124) that though much in Milltown up to April, 1875, he never heard, either there or at home, that Drawbaugh had a talking machine.

No. 90. *John B. Drawbaugh*, p. 599. — Age, sixty-five; brother of Daniel Drawbaugh; millwright and machinist; often known as Squire Drawbaugh; lived at Eberly's Mills all his life. There was an attempt in various parts of the testimony to represent that this brother was opposed to Drawbaugh's working on the talking machine, and that Drawbaugh kept it concealed from him. Unfortunately, the brother states that he assisted Drawbaugh in experimenting upon it considerably. His objection to Drawbaugh's working upon it was that he was wasting his time. If Drawbaugh had actually got it thoroughly well completed, so that it was a practical instrument, it could not have been supposed for a moment that making telephones

or patenting them was a waste of time; but if he was trying to make the thing talk and could not, and repeated his failure at intervals for ten years, the position of John Drawbaugh is perfectly intelligible. John Drawbaugh was not merely the claimant's brother and next-door neighbor, but he worked in the shop with him a good deal. He worked for the Drawbaugh Manufacturing Company in 1869 (ans. 115–120, p. 615). He worked for the Haucks from July, 1873, to July, 1874; he worked for the Axle Company in March and April, 1875, and at various other times he has done some small amounts of work in the shop; he has worked for Mr. Chellis, and he is of those who assisted in making the alleged reproductions of telephones for the use of this case (D. Drawbaugh, ans. 665, defts, ii, 907). He testified (p. 604):—

"*Q.* 24. Did your brother Daniel ever show you any talking machines?

"*Ans.* Yes, sir.

"*Q.* 25. Do you remember the time when he *first* showed you a talking machine?

"*A.* Yes, sir.

"*Q.* 26. How near can you fix that time?

"*Ans.* I would not like to fix any date nearer than some time inside of twelve months; it was some time before I went to work for the Haucks, and may have been the latter part of 1872, or some time in the beginning of 1873.

"*Q.* 27. Did you talk through the machine or hear anybody talk through it at that time?

"*Ans.* Yes, sir; I talked through the machine.

"*Q.* 28. Describe all that took place at that time when you were first talking through the machine.

"*Ans.* I came to the shop and Daniel asked me to talk into the machine, that he wanted to adjust something about the machine. I don't recollect whether he said what; I then talked in the machine, saying that Harrisburg was the capital of Pennsylvania, Washington City the capital of the United States of America, and Carlisle the county seat of Cumberland County. I talked something else, not recollecting exactly the words that I spoke; he then came around to me and told me to sing in the machine, commencing with a low tone of voice and increase to a loud tone. I done so.

"*Q.* 29. Do you know whether he heard what you said when you talked into the machine?

"*Ans.* Yes, sir; I asked him whether he understood me, and he said he did; he said then to me: 'You said that Harrisburg was the capital of Pennsylvania, that Washington was the capital of the

United States of America, and that Carlisle was the county seat of Cumberland County.'"

When asked to select the machine used from among the exhibits, he says (ans. 31, p. 605):—

"I can't exactly tell; the machine I talked through stood on a table; it had a mouthpiece something similar to that (*indicating* F), or to this *indicating* (M), but I could not positively say whether I talked into this machine (F), or one like it, or this (machine M), or one like it. I only remember that it had a mouthpiece on the top. I remember well that he came around and took the top off of the machine and done something to it, but I did not take notice what."

Says that he saw I at the shop, but does not know when; thinks it was before July, 1873, but would not positively say so. Says that he saw C, but does not know when; thinks however it was before July, 1873. Says that he saw B and F in 1869, or some like them; went into the shop and saw them on the bench.

To get him out of the difficulty that Drawbaugh *first* showed him the talking machine in 1872, and that he saw it in 1869, the defendants' counsel suggested to him that he saw it before Drawbaugh showed it to him, and he assents to that proposition (ans. 41, p. 606). He says that a month or two after his first talk through the machine, which, he states, was in 1872 or 1873, he talked through it from the cellar of the shop, and Daniel listened.

The witness was pretty bad when he tried to describe what he saw. Thus (p. 621):—

"*Q.* 164. You say in your cross-examination, that when you had the talk through the talking machine Dan came in and took the top off of the machine and did something to it, and that it was to make the hearing more distinct: how do you know it was to make the hearing more distinct?

"*Ans.* I know from the fact that I could not understand what he said. I told him so, and then he tried to adjust it so that I could understand it."

Then he admitted that he was a good deal confused about the matter, having first said that he talked back through the machine, and then he concluded that the time when he talked back was another and later time, though he did not say how much later. Finally, after he had his mind on the matter, and at the end of a rather long examination, he testified positively as follows (p. 622):—

"*Q.* 169. I mean at the time when he took off the top and did something to the machine, which, you say, was the first time you talked through it. I understand you to say that he took off the top, and did something to the machine at that time, because you could not hear distinctly; if so, you must have been listening at the machine, and yet I understand you to say you did not listen at the machine at that time; what I want to get at is the fact.

"*Ans.* I now say that my answer wasn't fully comprehended; when I first talked through the machine, Daniel came around and took the top off of the machine and done something to it, and at another time, that I was listening in the same room that Daniel was listening at the first time he talked to me, and I could not understand what he said, and he then came and done something to the machine, or adjusted it, so that I should understand.

"*Q.* 170. Did you then understand after he adjusted it?

"*Ans.* Some words, but not all.

"*Q.* 171. Your hearing is slightly defective, is it not?

"*Ans.* Yes, sir."

In ans. 64, p. 609, the witness endeavors to state with some elaboration that when he discovered that his brother was working on the talking machine he accused him of wasting his time on foolish inventions; "he was a good mechanic and could support his family." After the defence had pretended that the witness, although he experimented with his brother, did not know much about his work, he was next asked (Q. 65) whether his brother was not working at them pretty much all the time from 1872 to 1876, and of course he assents to that "so far as he knew"; then (p. 610): —

"*Q.* 69. From 1869 down to the beginning of 1880, did your brother devote the greater part of his time to any one invention; if so, what one?

"*Ans.* *All that I seen or noticed was entirely given to the so-called talking machine.*

"*Q.* 70. He made some experiments with the electric clocks and faucets, did he not?

"*Ans.* He did, but I never knew so much about that; I don't know that he ever called my attention to that machinery, — the clock; he did on several occasions to the faucet."

This is the brother, from whom the defendants wish the Court to believe that Daniel concealed his working on the talking machine; yet the clock attracted great attention. John further testified (p. 618): —

"*X Q.* 145. Did you ever see your brother [Daniel] working on his talking machines between 1876 and 1879?

"*Ans.* I did.

"*X Q.* 146. How often?

"*Ans.* I could not say how often.

"*X Q.* 147. Was it occasionally or was it very often?

"*Ans.* It was very often; I don't recollect of seeing him working at anything else."

Of what use is it after this for the defence to try and break the force of the silent testimony of this brother against their story by pretending that the telephone was carefully concealed from him?

The witness's answer that he discouraged his brother from working on the talking machine especially had its force all taken out by the following (p. 614): —

"*X Q.* 109. In that answer you say that you blamed him for working at these foolish things, that would amount to nothing in the end: what things did you name to him at that time?

"*Ans.* I meant his general inventions, that he had before and at that time."

But then he immediately tries to recover himself: —

"*X Q.* 110. Did you ever blame him specially about the talking machine?

"*Ans.* I did."

This witness, at any rate, did not believe that the reason why his brother Daniel did not get it patented was because he was unable, for he testifies (p. 614): —

"*X Q.* 102. In your twenty-eighth answer you undertook to describe what took place the first time when you heard talking through your brother's machine: when was that?

"*Ans.* That was at the time that I said, — a little while before the Haucks commenced work there; but I can't say what took place at the time, any more than I said to him, 'Dan, if this is as good and as profitable a machine as you represent it to be, *why don't you get it patented?*'

"*X Q.* 103. Was that the first time that he and you had ever talked about the machine?

"*Ans.* We had some conversation about it before that.

"*X Q.* 104. What was that conversation?

"*Ans.* I couldn't say any more than that I hooted at the idea."

He then says that he has seen A, D and E, but cannot tell when, and all the other exhibits but cannot tell when.

He says that part of the money that Drawbaugh got from Gorgas and others for his faucet he used to pay old debts (x-ans. 91); that the debts he paid (x-ans. 92, p. 613) were: —

"Debts that he had contracted for the living of his family, such as meat, flour and store bills.

"*X Q.* 93. Had not he been able to earn money enough to pay for necessaries for his family as he went along?

"*Ans.* Yes, he would have been able, and more than able, if he had not expended his time on his experiments and inventions.

"*X Q.* 94. What experiments and inventions had he been expending his time on then?

"*Ans.* The telephone, or speaking machine, so called here."

He knew that the rule was to swear to talking machines as the cause whenever poverty was mentioned; but like a country squire drawing a deed, he was using the wrong blank; he swore to the cause a little too early, and so he had to confess: —

"*X Q.* 95. Had he been spending his time on the speaking machine before he sold his faucet to Gorgas and others?

"*Ans.* No, not that I know; I didn't know anything about him working on it then at all.

"*X Q.* 96. Why was it he had run up debts for groceries and provisions before he sold his faucet to Gorgas?

"*Ans.* He was then experimenting on faucets and some other inventions that he had."

But the only "inventions" of that period were the faucet and nail machine, and Daniel Drawbaugh himself testifies that his backers paid him for all the materials and time spent on these (defts, ii, x-ans. 711, pp. 910, 911).

This witness does not have that sense of humor which Daniel Drawbaugh seems to possess, for he testified with apparent unconsciousness as follows (p. 612): —

"*Q.* 71. Did Dan ever talk to you much about his financial condition or not?

"*Ans.* He did not; on several occasions I asked him for a little money, and he always told me promptly that he had none."

This witness was a workman for the Drawbaugh Manufacturing Company in 1869, and says that once he casually saw on a bench something like F or B. That does not agree with the notion that the thing was practicable and operative, and well known to everybody at the time: for Daniel never spoke to him of it before 1873.

The witness gives a succinct statement of the Pump Company which agrees with the facts more elaborately told elsewhere (p. 616) : —

"*X Q.* 121. The Drawbaugh Manufacturing Company was the company composed of Gorgas and others, who made your brother's patent faucets, was it not?

"*Ans.* Yes, sir.

"*X Q.* 122. It was the same concern that was sometimes known as the Pump Company, was it not?

"*Ans.* I guess that will want a little explanation to show the difference ; in the commencement, the Pump Company and the Faucet Company were two different companies ; after the invention of the faucet was completed, Daniel discovered that he was not able, for the want of funds, to bring the faucet into market ; he sold the right of the faucet to a company by the name of Gardner & Croll, for the sum of one thousand dollars, for which he took Mr. Gardner's paper, with Jacob Coover's name for security ; then Daniel turned the faucet into a pump, or rather made a pump on the same principle as the faucet ; on that they formed a company in the names of Mr. Gorgas, Musser, Hursh and others ; they were to pay him a consideration of $6,000, as I have heard ; that company established a machine shop at Eberly's Mills, which, some of the company told me, cost them from $20,000 to $25,000 ; after manufacturing the pump for about one year they found the pump to be a failure ; the Pump Company then purchased the Drawbaugh Rotary Molasses Faucet from Mr. Gardner and others ; the price they paid for it, I don't know."

P. 617. "X *Q.* 128. Did Mr. Gorgas have anything to do with the manufacturing, or did he come over to the shop where manufacturing was going on?

"*Ans.* Yes, sir, he had, and he was there very frequently, as much as two or three times a week.

"X *Q.* 129. There were two Mr. Gorgases, father and son, were there not, in the company?

"*Ans.* Yes, sir.

"X *Q.* 130. Which of them was it who was over there frequently, or were both?

"*Ans.* Young Mr. Gorgas directed the work in the shop, and was there almost all the time, managing the affairs of the shop ; and the old gentleman was there often."

He says (157, p. 620) that in 1869 he heard people say that that there was talking done with this talking machine, but his brother never spoke to him about it, and he never saw it used before 1872 or 1873. On redirect examination he testified (p. 622) : —

"*X Q.* 174. Did you listen at any of your brother's machines while you worked for the Haucks in 1873 and 1874?

"*Ans.* I think I did.

"*X Q.* 175. Had you ever listened with any of them before you worked for the Haucks?

"*Ans.* I don't remember that I did."

We thus got it finally settled that this witness, Daniel's brother, living alongside him, working considerably in the shop, swears that he never was spoken to by Daniel about the machine, never talked through it before 1873, at which time they allege he had had telephones six years; and yet he was himself a mechanic, and a man of some means, for it appears that one particular job which he happened to mention that he undertook during that period was a contract for $3,300, — setting up the mill work in a mill, — which implies that he was a man of some enterprise and of some means. Now it is quite impossible to believe that Drawbaugh, with one brother capable of undertaking a work of that kind, and another who at one time ran a distillery, and at another ran a line of private freight cars of his own from Cumberland County, Pa., to New York, Philadelphia and Baltimore, could not have raised and would not have raised $50 for a patent that was going to make their fortunes, if either of them had felt that he had got a practical talking machine. It may be that no one realized the enormous importance and value which the invention has assumed in the last four or five years, but no man could ever have doubted for a moment that it was useful, and would have a very large commercial value.

We do not believe any of these stories; we are only trying to find out what the defendants want the Court to believe; whether it is believable, and whether the strongest story they can get from the claimant's brother is not inconsistent with and destructive of the history they allege.

This witness saw that unproduced box fastened to the cupboard door.

P. 608. "*Q.* 56. From July, 1874, when you quit Hauck's, to March 16, 1875, when you went to work for the Axle Company, you say you were at your brother's shop frequently: what was he doing with the talking machine, if anything, during that time?

"*Ans.* I noticed that he was working at it during different times that I was there; that some of them were standing on the work bench,

and that some of them were taken apart, and the parts taken out were also lying on the work bench; I noticed also that one of them was fastened to a cupboard that was there, connected with a wire that ran to the cellar."

"*X. Q.* 139. In your fifty-sixth answer you say you noticed, between July, 1874, and March, 1875, what you supposed was a talking machine fastened to a cupboard in the shop: whereabouts in the shop was that?

"*Ans.* In a small room in the northeastern corner of the shop.

"*X. Q.* 140. Was it fastened to the cupboard door, or to the standing part of the cupboard?

"*Ans.* The cupboard door.

"*X. Q.* 141. Inside or outside of the door?

"*Ans.* The inside of the door; when the door was closed, it was inside of the cupboard.

"*X. Q.* 142. How did you come to see it then?

"*Ans.* The door stood open very often.

"*X. Q.* 143. How big a thing was it, and what kind of shape?

"*Ans.* I don't know that I can exactly recollect; it might have been four or five inches, and was square, probably two or three inches deep; I could not tell; I didn't look at it particularly.

"*X. Q.* 144. Was it made of light wood or dark wood?

"*Ans.* I think it was dark wood."

The defendants have never given any explanation of these frequent references to a box. (See p. 123, *supra*.)

No. 91. *George W. Drawbaugh*, p. 623.— Age, thirty-eight; machinist; son of John B. Drawbaugh; has worked in Drawbaugh's shop. He was there, he says (p. 625), "very seldom between 1867 and March, 1874." From March 9, 1874, to June 20, 1874, he worked there for the Haucks (ans. 18). He worked for the Axle Company parts of two days, — Jan. 22 and Jan. 28, 1875. He worked for them again two weeks some time in 1875, and helped his brother Harmon in some job work for the Axle Company in 1875, he thinks. Capt. Moore testifies that Harmon made axles for them by the piece in the winter of 1875–6. In 1876 was at the shop "very seldom" (p. 626). From April 30, 1877, to June 22, 1877, he worked for his uncle Daniel, — built a set of Pelton horse-power patterns and made some clock cases.

From the spring of 1878 to the spring of 1879 he "was working pretty regularly for the Clock Company" (ans. 33, p. 626).

He testifies about telephones (p. 624):—

"*Q.* 13. State when you first had any personal knowledgeof his talking machine, and state all the circumstances.

"*Ans.* The first knowledge that I had of the talking machine was during the time we were painting that wagon; he asked me to talk to him through the machine, and I talked into it, to accommodate him more than because I cared about it; while we were talking, he halloed over to me and said, 'George, do you hear me?' my answer was that I did; he said then that I should listen a little: he wanted to whisper through the machine; then he asked me whether I could hear the whispering. I told him that I could hear him rather plainer than I could while I spoke louder; he then asked me to talk and he would listen; I talked into it for him, and then asked him whether he could hear me; he allowed that he could, but he couldn't understand what I said; then he said, 'What in the devil is the reason I can't hear as well as you can?' I answered him saying I didn't know why he couldn't; there was some more connected with that time, but I — when I went to mix my paint I couldn't just get a hold of the can; I found one in the room on the table; he says, 'George, where did you get that can?' I answered him, 'In the room on the table'; he said, 'Dang it! I wanted that can for experimenting'; he said then that we could clean it after I got through with it, and that it would then answer the same purpose.

"*Q.* 14. Did he ask you to try the talking machine more than once while you were painting that wagon?

"*Ans.* Yes, sir; he did quite often.

"*Q.* 15. And did you do it?

"*Ans.* Yes, sir.

"*Q.* 16. Do you recollect anything that he said to you through the machine during those times?

"*Ans.* Yes, sir; I remember of him mentioning my name, 'George,' and some of the principal cities."

It became necessary, therefore, to fix the date when he made that wagon. The wagon, Daniel Drawbaugh testifies, was made for Jacob M. Sadler and Daniel Drawbaugh as partners to use in the business of putting out hydraulic rams, and the particular painting that Daniel did upon it on this occasion was to paint a hydraulic ram upon it. It appears from the deposition of Drawbaugh (defts, ii, 1013, x-ans. 1187), and of William Sadler, father of Jacob, that Drawbaugh and Sadler carried on this business not more than one summer, and during the year when the wagon was procured (complts, ii, 1054, ans. 146). G. W. Drawbaugh undertakes to fix the date of it in the manner used by the defendants, and indeed much better than they usually attempt to fix dates;

he says that he bought the lumber for that wagon from John F. Lee, of New Cumberland, and began it immediately after he purchased the lumber. Immediately after he testified, they called No. 92, John F. Lee (p. 632), who testified that he was a lumber dealer at New Cumberland; that the only charges anywhere on his books for lumber sold to George Drawbaugh were boards and poplar planks in 1870, grub plank and poplar plank in March, 1870, and hickory scantling, fifteen cents, in May, 1870; so the defendants assume it to be thus proved that the wagon was made in the spring of 1870. There is one little difficulty to begin with, and that is that to the mere legal mind it does not appear that either grub plank nor poplar plank nor boards nor fifteen feet of hickory scantling will make a wagon: so they asked Lee to swear that these things are proper for a wagon; and he declined to do it, and they produced nobody else who says that they are.

Now this whole carefully prepared scheme for fixing that date, which may fairly be taken as a sample of some of their best plans for fixing dates, turns out to be without any foundation whatever, and directly contrary to the truth; the proof of that is as follows: —

The defendants produce a paper which they allege to be the affidavit of Jacob M. Sadler. Jacob M. Sadler is dead, and they thrust the affidavit into the case. The value of it in their favor is nothing; but of course it is proof against them. That affidavit — referred to in the defendants' surrebuttal, p. 212, and printed on cross-examination of one of the complainants' witnesses (complts, ii, 1050), states that the partnership was in 1871. They call the justice of the peace whose name is subscribed to the jurat of this alleged affidavit, and he states that they came to his office twice about it; that the first time there was some trouble about Sadler's recollection of the dates, and that he professed to go home and look at his papers, and on a subsequent day they came back and made the affidavit. As the only date mentioned is the time when he and Drawbaugh were in partnership together on rams, it must be assumed that that is the correct date; the date given in that paper is 1871. But, besides that, the complainants produced the witness Henry Neidig (complts, ii, 1520). He testified that Drawbaugh

ram was put upon his place. The bill which he produces is made out to "Drawbaugh and Sadler," is receipted by "Drawbaugh and Sadler," and dated June 10, 1871. He states that the ram was put in May, 1871. As they only carried on business together one year, it is certain therefore that the ram wagon was made in 1871, and not in 1870, as G. W. Drawbaugh and Lee try to fix it.

We submit that this failure is enough to condemn the usual practice of the defendants, — attempting to fix the date of one event by proving the date of another, and assuming a connection between the two simply by memory, without any logical connection, though in this case there is an appearance of logical connection. It is settled therefore that this painting of the wagon was in the spring of 1871, and that George Drawbaugh had no knowledge of the talking machine before that time. This becomes very important in a later part of the case. (See Joseph Ditlow in defendants' surrebuttal, p. 521 and *infra*.)

George W. Drawbaugh's testimony about the other exhibits is (p. 627): —

"*Q.* 46. Please look at machine 'C reproduced,' and state when you first saw a machine like that, to the best of your recollection.

"*A.* This machine, or a machine like it, I saw in 1874.

"*Q.* 47. Did you ever use it or witness its use at that time?

"*A.* Yes, sir; I used it and witnessed its use by others.

"*Q.* 48. Please look at the two machines 'F' and 'B,' and state when you first saw machines like those, so far as you recollect.

"*A.* Those machines, or machines like them, I saw first in the year 1870, while painting the wagon box that I have spoken of before."

"*Q.* 55. State whether you did or did not, from the time when you worked for the Haucks down to the time when you worked for the Clock Company, see a good many different talking machines in and about your uncle Daniel's shop. What is the fact about that?

"*A.* I really can't say whether I did or did not, in the year 1877; I know I seen different machines. From 1874 to that date I wasn't much in the shop, — not a great deal, — only what short time I worked for the Axle Company.

"*Q.* 56. When you worked for your uncle Daniel in 1877, making the horse-power patterns and the clock cases, what was he principally giving his own attention to?

"*A.* The most of the time he was working on what he termed his talking machine."

"*Q.* 60. Do you remember what he was doing when you worked there for the Axle Company a short time in 1875?

"*A.* I can't say that I do, more than my brother used to remark that Dan's on that machine of his, and had better be doing something else."

The brother referred to is Hiram Drawbaugh, who *now* professes that he then knew the instruments to be perfectly operative and successful.

The witness says that he has seen D and E, but gives no date, and never saw them used; says that he saw A, but that it had a mouth-piece in the middle; gives no date and never saw it used.

This is all that the nephew, living in the village, knew up to the end of 1876.

Two things in his deposition are striking: Daniel Drawbaugh testifies that he had C a good while before the wagon was painted, and that he actually had it on his bench while painting the wagon (defts, ii, 809, ans. 171). The Court will not believe that under such circumstances Drawbaugh repeatedly used B. Either G. W. Drawbaugh's testimony is the result of that imagination which makes witnesses readily think they remember B, or else what he saw was a string telephone (he does not refer to electricity in connection with it), or else the better instrument, C, did not exist then.

Another thing is, that he worked in the shop a good deal during 1875, when it is alleged that D and E were produced; he has only the vaguest recollection of having seen them at some time and never used them. (See for this the brief about D and E and pp. 125, 178–180, *supra*.)

He also testifies (p. 628): —

"*Q.* 49-50. Do you recollect whether the tin box on machine 'B' was closed at either end at that time?

"*A.* It was closed at one end; this end next to the magnet; that I recollect of.

"*Q.* 51. Do you recollect what it was closed with?

"*A.* I was under the impression that it was bladder; he was gathering up all the bladders around the country at the time from all the butchers. I know it was bladder, for I remember of asking him, and he told me that was what it was.

"*Q.* 52. Do you recollect of anything being *attached to that bladder?*

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"*Q.* 52. Do you recollect of anything being *attached to that bladder?*

"*A.* I think there was, — either a thread or a piece of wire; I didn't pay much attention to it."

This witness has not a very keen sense of the ridiculous, apropos of bladders.

It cannot be doubted that *his mind connects string telephones with his uncle's work*, — a string attached to the *bladder*. The defendants saw this and tried by a most deliberately instructing question to lead him away, but in vain.

"*Q.* 53. I do not mean at the edges of the bladder, but across the middle of it, in front of the magnet; do you remember whether there was anything attached to it there or not?

"*A.* I can't say that I do; I didn't pay enough attention to it to examine it closely."

Then the witness is called upon to speak of Drawbaugh's financial condition (p. 628): —

"*Q.* 61. Do you know what Dan's financial circumstances were during the ten years prior to 1880?

"*A.* He generally appeared a little hard up, I know that."

He says that his uncle was so poor that he frequently borrowed money of him, as much as two or three dollars at a time, and has never paid him for all the work that he did for him.

Unfortunately we have got some better proof of the money relations between Daniel and his nephew, and on examination it appears from the testimony of Jacob Evans, the miller (complts, ii, 97*J*), that the miller refused to credit George Drawbaugh at times, and goods furnished to him from the mill were charged to Daniel, his uncle, but that they never hesitated to let Daniel or his family have whatever they wanted from the mill on credit.

No. 92. *Daniel B. Musser*, p. 634. — Age, thirty four; Eberly's Mills; farmer; lives in the same town with Drawbaugh, and has known him all his life; has lived close to the village since 1867; states that he first saw a talking machine at Drawbaugh's shop in 1873; it consisted of an old tin box; B was the instrument; says that he fixes that because he remembers that it was the year before his wife died. He says that he saw it again in 1876, because he remembers that he got his reaper repaired in that year; he thinks he was there in 1878, though he has got nothing to fix that date by, and he thinks he saw H there then.

No. 94. *Isaiah Steigelman*, p. 636. — Age, fifty-two; Shiremanstown; shoemaker. Lives at Shiremanstown, three miles from Drawbaugh's shop, and has known Drawbaugh for thirty years. Says he has only been at his shop once since 1867, and that was in August, 1878; he saw a talking machine there at that time; it was N. Saw Mr. Grissinger at the blacksmith shop outside; it was not Theodore Grissinger.

No. 95. *P. B. Reeser*, p. 638. — Age, fifty-nine; Shiremanstown; carpenter. Was at Drawbaugh's shop in 1878 with Steigelman, and having heard Steigelman's testimony is rather inclined to say that it is correct.

Never saw any others, and never talked through one; that is all this neighbor pretends to know.

No. 96. *Zaccheus Bowman*, p. 639. — Age, forty-six; Camp Hill; farmer. It appears from this deposition and from Drawbaugh's examination (defts, ii, 885, ans. 536) that Dr. Bowman, brother to the witness, was Drawbaugh's family physician for many years. It would be supposed that he might know something about the alleged talking machine, and might be able to testify, but instead of calling Dr. Bowman, who was there, of course, constantly, as it is alleged that some of Drawbaugh's family were frequently sick, they called Zaccheus, his brother, who says that he went there once with the doctor, he thinks in 1871 or 1872, and talking about his electric clock, "Drawbaugh said, 'I am now working on a machine that is to talk,' and we just laughed at the idea." As Dr. Bowman has not been called, it must be taken as an understood thing that up to that time he had never heard of it, and that he does not now know anything of it which it is worth while to lay before the Court. Considering the kind of stories that have been laid before the Court by people brought from a distance, — that they had heard somebody say that somebody else had heard somebody else say something about it,— it must be concluded that Dr. Bowman has no knowledge on the subject and does not believe the story.

No. 97. *J. A. Moore*, p. 640. — Age, forty-seven; Camp Hill. This witness, commonly known as Capt. Moore, has long been the owner and manager of a large institution called the "Soldiers' Orphan School" at Camp Hill, about a mile and a half from Drawbaugh's shop. He was the chief man of the Axle Company, heretofore several times spoken of. It was a copartnership, formed in the beginning of 1875, for the purpose of manufacturing the patent axles of Jacob Kline, father-in-law of Moore, and they arranged to occupy part of Drawbaugh's shop, and for a whole year employed him as their chief machinist. He began to do some preliminary work for them in January, 1875, and they fully embarked in the business of manufacturing axles about April 1, 1875. They carried on the business through that year, but did not find it profitable; carried it on upon a reduced scale in 1876, applying in that year their patented bearing to certain parts of reapers and mowers, brought to the shop for the purpose by farmers. They bought considerable new machinery, put it into Drawbaugh's shop, and it remains there. They employed him to construct at his shop and at their expense special machinery, tools, etc., for the purpose of making the axles; one was a drifting tool, which was commonly spoken of by the neighbors as a machine to bore a square hole; others were for making the cones, etc. They put considerable money into their business; it does not appear precisely how much, but some checks produced by them show that before the last week in March, 1875, they paid about $1,000 to one man alone for machinery purchased; in addition to that they apparently bought some other machinery, and certainly constructed some and raised all the capital needed to carry on their business. Soon after they got started, an interference controversy arose between the Kline patents and some patents belonging to a certain sewing-machine company. That interference controversy was carried on by Mr. Theophilus Weaver as solicitor for the Kline patent, and in the course of the testimony Drawbaugh was examined as a quasi-expert on behalf of Kline. His deposition, which is a short one, was put in evidence during his cross-examination (defts, ii, 1023), and is printed with complts, exhibits, iv, p. 85. Captain Moore is son-in-law of Jacob Kline, the inventor of the axle; another son-in-law of Jacob Kline is Henry N. Bowman, a

witness called for the defendants in surrebuttal, p. 1135, who does not profess to have any knowledge of the talking machine, but who was employed by the defendants as a justice of the peace to go around with them and take forestalling affidavits.

These three persons have lived for many years and still do live at Camp Hill, about a mile and a half from Drawbaugh's shop. It would seem very clear that if there was anything in the nature of a talking machine at Drawbaugh's shop during the year 1875 and the first part of 1876, the most active year of the business, or even during any part of 1876, no persons could have had fuller knowledge of it than the members of the Axle Company, especially including Moore, the principal moneyed man of it, and Kline, the inventor, who was necessarily at the shop looking after the manufacture. It would appear, also, that, if these men knew anything of it, Henry Bowman, brother-in-law and son-in-law and neighbor, must have had considerable knowledge of it too. The year and a half of the Axle Company is precisely the year at the beginning of which the claimant alleges that he produced D and E, the first practical instruments, and at the end of which he heard of Bell's invention. It is, therefore, a most striking epoch. Now the defendants have taken the depositions of Moore, Bear and Grove, three of the four members of the Axle Company, and of Henry Bowman, the other son-in-law of Kline; they have not taken the deposition of Jacob Kline, but upon the cross-examination of one of our witnesses by them (Theo. Weaver, complts, i, 448, x-ans. 409) the fact appeared that Kline, upon being applied to, stated that he knew nothing of the telephone, and, considering his personal relations to Drawbaugh and the Drawbaugh party through his connections with Henry N. Bowman and Capt. Moore, it was their duty to call him if they wished to show a different state of facts.

It must be taken, therefore, as a fact, first, that Kline, not called, knew nothing at all about the talking machine; that Bowman, who was called and not asked anything about the talking machine, knows nothing, and that the other witnesses, Moore, Bear and Grove, remember only what they have testified to. Mr. Weaver, the solicitor of the Axle Company, who had considerable occasion to visit the shop during 1875 in connection with that business, was called by us,

and is a fatal witness against the claimant. It must also be taken, since it is alleged that all that existed about the talking machine was freely made known to the public, that if these three witnesses, called from the Axle Company and from Drawbaugh's shop, do not testify to enough to make out a case very clearly, that fact, together with the silence of the others connected with the Axle Company, is fatal to the defence.

Capt. Moore produced the books of the company, and from them and from memory his testimony is as follows: —

George W. Drawbaugh worked directly for the company 11½ days in May, 1875.

John B. Drawbaugh worked 12½ days in March, 12½ in April, and 6½ in May, 1875. It appears elsewhere that John's work in March was fitting up the shop before the manufacture began (see p. 90, *supra*).

Harmon Drawbaugh worked three days in March, nearly all of April, May, June and July, and about a third of the time from then to the middle of November; in April, 1876, he was also paid for sixty-six sets of axles at a dollar a set, job work. He was paid at the same time for a day and a half's work done by his brother George, and later in April he was paid for working at "Centennial" axles.

The payments to Daniel Drawbaugh by the Axle Company are put in evidence from the books, and they are: —

From April 1, 1875, to Aug. 6, 1875	$122.50
From Aug. 6 to Dec. 14, 1865	182.20
Dec. 18	5.50
April 1, 1876	129.95
May 22, 1876	10.00
September, 1876	5.00
January, 1876	8.90
November, 1876	20.00
Making in all, amount paid by the Axle Company to Drawbaugh during the period beginning early in 1875, and ending in the summer of 1876	$484.05

The witness was examined about his knowledge of the talking machine. He says that, according to his recollection, Drawbaugh spoke to him of a talking machine, and showed him one (p. 650):

"*Q.* 22. About when was it, as near as you can remember, that he first showed you his talking machine?

"*A.* It was during the month of May, 1875.

"*Q.* 23. Did he say anything about patenting the machine at that time; if so, what?

"*A.* He did; he said that he was unable to procure a patent himself, and desired me to go in with him and get a patent for it.

"*Q.* 24. Did he offer an interest in the invention to any one who would go in and get a patent?

"*A.* Yes; he was anxious to have some one take hold of it with him who had the means to procure a patent and put it on the market. I was so fully engrossed with our own patent axle at the time that I told him I did not wish to go into any other new inventions. I would add, further, that we had also (I mean the firm) another patent journal used for sewing machines, reapers, etc., which antedated our patent on the axle, and which we were also manufacturing.

"*Q.* 25. At that conversation with Mr. Drawbaugh did he or not suggest any particular line of business in which he thought the talking machines could be introduced?

"*A.* He spoke of the use of it in cities to supersede the fire alarm which existed at that day.

"*Q.* 26. Please look at the machine 'B,' now shown you, and state whether or not he showed you that machine in connection with that conversation.

"*A.* I believe this is to be the exact machine which he showed me during that conversation.

"*Q.* 27. Do you recollect whether or not the end of the box next to the magnet was closed at the time of that conversation?

"*A.* It was closed with something thin, like a bladder, drawn tightly and tied around it like a drumhead.

"*Q.* 28. Do you remember whether or not, while you were engaged in business there, he had other talking machines around in different parts of the shop?

"*A.* I never saw any in use. I saw a number of pieces of wood that were carved out in different shapes. I never had any conversation with him as to their use.

Q. 29. Did you feel much interest in his talking machine at the time?

"*A.* I did feel considerably interested in it, and told him, if it could be put to practical use, it would be a fortune to any person or persons who would succeed in bringing in out; I can't remember the words exactly, but that is about what I said to him.

"*Q.* 30. Did you take interest enough in it to inquire about it

afterwards, or to examine any of the machines that you saw lying about there?

"[*Objected to as argumentative and ambiguous.*]

"*A.* I observed him frequently working at machinery, that I thought was connected with this same machine, though put up in different styles and different shapes; I was not well enough acquainted with his objects at which he was at work, nor his designs, at the time to give an intelligible account of their working or what they were for; I made inquiry of him as to the purpose of a machine that was on a table in another room, which worked by a magnet, and pressed certain keys with the alphabet on, but I don't know the object of it now; *I didn't examine any one that had reference to this talking machine.*

"*Q.* 31. Are you able now to identify any of the machines that had reference to this talking machine, other than the instrument 'B,' now lying on the table before you?

"*A.* I do not think I could recognize any other.

"*Q.* 32. When Drawbaugh spoke of using the talking machine as a substitute for the fire-alarm telegraph, did he state how he thought of using the machine; whether by batteries, or by magneto-electricity?

"*A.* He spoke of using it, as this was used, by an electro-magnet; this is the expression I understood him to use."

That is the best that can be stated by a man who was actually engaged in that shop during the year prior to the date of Mr. Bell's patent; this fact of itself was fatal to Drawbaugh's claim. Capt. Moore's story is inconsistent with the existence of any practical working instrument, for if there had been such a thing Moore, one of the few men of education called by the defence, would certainly have seen it *and heard* it. Moreover, the only instrument that he ever saw, according to his story, is B; and this, not dismantled and superseded but in working order, the bladder on, if there be any truth in his story, was the only instrument shown him when he was asked to put money in. The fact that there was no better instrument than B in 1875 — this is the most that Moore alleges — is fatal to the claimant's case. He says expressly that he saw pieces of wood, that he did not know whether they were talking machines or not, but that he never saw any machines actually put together except B. What he did see and hear about it during that whole year never led him to talk through it; this could only be because the impression left on his mind was that it was a curiosity

to look at, but not a thing to use; no general recollections are worth anything against this positive fact.

This positive testimony of their own witness is entirely fatal to the story told by their other witnesses; the testimony of an intelligent man, the owner and principal of a large school, a man of means and energy, is worth more to the Court than that of fifty common farmers and farm laborers, habitual or casual visitors at the shop, without the intelligence to know what they saw, or the ability to report what was exhibited there.

His testimony, however, is very significant in another view. Whatever machine it was that was shown to him, the use to which Drawbaugh said he was going to put it was "to use it in cities to supersede the fire alarm, which existed at that day" (ans. 25). "He spoke of using it [for the fire alarm], as that was used, by the electro-magnet; this is the expression I understood him to use" (ans. 32, p. 651). Now B was used with a battery transmitter, and not with a magneto transmitter, but Drawbaugh had made a magneto key in 1874, and thought it of great value; we have no doubt that it was mistaken by the witness, and that he has been led to believe that it was a talking machine; for we know as matter of fact that Drawbaugh stated that one of the particular uses which he proposed to make of that magneto key was to use its electro-magnet as distinguished from batteries — precisely the distinction pointed out by this witness — for the fire alarm in cities. Drawbaugh carried it to Harrisburg, and showed it to Keifer, the electrician who had put up the fire alarm, with a view to its use *for that purpose* (Keifer, complts, ii, 1280). And more than that, his famous advertising card expressly mentions the fire alarm as one of the valuable uses to which it can be applied (p. 106, *supra*). It cannot be doubted that the machine which Moore did see, and which he has in his mind, was the magneto key, and that after the lapse of years, and under the influence of the talk in the neighborhood, he has been led to believe — the distinction never having been brought up to him — that the thing which was shown him, and which he felt an interest in, was the talking machine, — whereas it was the magneto key of Drawbaugh's advertisement.

The effect of the substantial want of knowledge on the part of the members of the Axle Company of any talking machine has

been considered fully in the body of the brief. (See also Bear, No. 101, p. 215, *infra;* and Grove, No. 106, p. 226, *infra.*)

No. 98. *W. N. Kline,* p. 654. — Age, forty-four; Shiremanstown; fire-insurance agent. This is not the Kline of the Axle Company, but an entirely different man. He lives three miles from Drawbaugh's shop, and became acquainted with him July 17, 1867. On that day the witness went to work for David Stevenson & Co., in Harrisburg; they were then employed making patterns for molasses faucets for the Drawbaugh company, and Drawbaugh directed witness about the work. He says that in 1867 or 1868, when putting up these faucets, "Drawbaugh said to him that the time would come that we would talk face to face at a great distance" (ans. 2).

"*Q.* 7. Did Mr. Drawbaugh say anything to you at that time about making experiments with a view to enabling a person to talk to another to a distance?

"*A.* Not to my recollection.

"*Q.* 8. When did you next have any conversation with him about talking to a distance as if face to face?

"*A.* In the fall of 1877."

He says that at that time he met Mr. Drawbaugh on the road, and a conversation ensued: —

"He was then telling how his talking machine was working, and I questioned him then how he could talk such a distance as he said. He said it was done by electricity. Then he explained it fully to me as to how it works, but said he was too poor to get it patented; that if he could get some help, there was money in it. That is about all the substance of that" (ans. 9).

The witness says that he first saw a talking machine at Drawbaugh's shop in the spring of 1879, and then talked through it; he thinks it was P.

Now this is another instance where a man not directly in the employ of the Faucet Company, but working for it in 1867 and at least the earlier part of 1868, obtained from Drawbaugh the information that "the time would come," but without any pretence that he was then even experimenting with that end in view.

If Drawbaugh had the conversation related in 1877, it is another instance in which he pretended to his ignorant neighbors that he had

an invention which he could get patented at once if he had the means, and that there was money in it, whereas he knew perfectly well that it already was in extensive commercial use.

The witness next shows how unreliable he and similar persons are. The case of the instrument P contains a transmitter and a receiver; the transmitter part consists of a short mouthpiece about an inch long which is to be spoken into; the receiving part has the earpiece at the end of a flexible tube which is now three feet long. The witness thinks that they then had a tube perhaps six or eight feet long, and in this experiment Drawbaugh spoke into the transmitting part of this instrument and the witness listened at the receiving part of the same instrument. They therefore could not have been more than six feet apart, and might have been much less. The witness is quite deaf in one ear. When he put the listening tube to his well ear, which of course shut off the sounds through the air and allowed nothing to be heard except what came through the instrument, apparently he could not make out much; at least, he says that he does not remember what he heard. Then when he put the listening tube to his deaf ear, leaving his well ear exposed to the voice of the speaker less than six feet away, — wonderful to relate, — he heard perfectly well what was said through the instrument.

"I put that to the ear in which I am hard of hearing, and he spoke into the other side of the instrument and said that Harrisburg was situated on the banks of the Susquehanna River; this was on the deaf ear; it was as distinct as could be; that is what makes me remember it, because I had not heard anything in that ear since I was a young man" (ans. 19).

The witness did not seem to realize t he ludicrous character of his answer.

He said on his redirect examination that Drawbaugh explained it to him, but upon the cross-examination it appeared that the explanation merely was (p. 657): —

"He said you could just speak into a tube like I found it afterwards, and you could hear at the other end the very word that was spoken in.

"*Q.* 26. Was that substantially the explanation he gave you of how it worked?

"*A.* That is to the best of my recollection now."

Then he was asked to state everything else that Drawbaugh had ever stated about the machine, and he said he could not remember anything else in particular. Upon redirect examination, on being asked leading questions, he at once assented to them, and professed to remember what was asked of him, and then a further cross-examination developed the fact, which was true of him as of a good many of the others, that it is impossible for such witnesses, with such memory as they have, to state the substance of what they heard on the subject, though under the influence of leading questions which include specific statements they can be easily brought to assent to them. Now supposing that a witness does that with perfect honesty and can have specific details really recalled to his mind when mentioned to him, nevertheless it is true that his testimony in such case is worthless, for all that the Court can possibly know from him is, certain matters or details previously known by others and suggested to him; whether other parts of the conversation were such that the conversation taken as a whole would give a different idea, the Court can never know, for it is impossible for the *complainants* to be in a position to suggest details or to lead him by that kind of interrogation. The moment it appears, therefore, that a witness cannot relate what he saw or what he heard, in answer to a general question, but requires leading and suggestive questions to bring out any parts of it, that moment the whole testimony of that witness is unreliable and worthless.

The witness makes another answer which shows the manner in which he and others gloss over their duty to their oath and the Court. It is not enough to make a statement evidence that the witness shall swear that "to the best of his recollection" it is true; he must be able to state that he knows it is true. He may believe it and have no recollection to the contrary, and, with the intelligence and training of the ordinary countryman, he may justify his conscience in swearing to it as true "to the best of his recollection," — but he has no recollection worth referring to. Now the Court will find throughout this case that a very large amount of the defendants' testimony is obtained in answer to questions requesting the witness to state "to the best of his recollection," or that the answers are similarly qualified. Whatever that phrase may mean to a lawyer, or to men of trained

minds, it means for the country witness that he may state what happens to be in his mind, and may satisfy his conscience by the feeling that he does not mean to tell a lie; and yet his recollection may be so indistinct and feeble as to be worthless. When questions are put to the witnesses one after another, not to state what they know nor to state what took place, but to state "to the best of their recollection," we cannot doubt that the feeling among all the witnesses is that it is enough for them if for the moment there is nothing in their minds to positively contradict what they say. We are sure, when this mode of handling witnesses is habitually adopted, that it is because counsel know that they cannot get the witnesses up to the lawful condition. It is in effect tampering with the conscience of the witness.

No. 99. *Jacob G. Landes*, p. 659. — Age, fifty-eight. Lives at Mechanicsburg; pattern maker; has known Drawbaugh for forty years. He says that Drawbaugh moved to Mechanicsburg in the spring of 1876, and within a couple of weeks afterward he told the witness that he had made a machine by which one could talk the whole length of Mechanicsburg as distinctly as though a person was talking in a room. He said that it could be used for several miles; he described it, but the witness did not understand the description; he said he would take a patent out on it if he could secure the means. Observe that it appears from Drawbaugh's own deposition that during that very fortnight he had received about $1,400 in cash, and it is the worst folly to ask the Court to believe that Drawbaugh could not out of that have saved $50 for a patent if he thought it was going to make his fortune. Specifically the witness said (p. 660): —

"*A.* 4. He told me that he had made a machine; he called it a talking machine or speaking machine. I don't know which of those words he used; he said that he had tested it, and that he could hear distinctly, — the distance of the length of Mechanicsburg was the distance he gave, — just as distinctly as though a person was talking in a room; that is about the idea he gave of it."

He said it would take the place of a telegraph, and that he would take out a patent on it. The witness then says on cross-examination that he had another conversation with Drawbaugh (p. 660): —

"*X A.* 10. It was some time after this conversation; it might

have been six or eight months, that he said he was going to get it patented. He then expressed nothing concerning the means; he said that he had it so that he was going to get it patented."

If this testimony is to be taken as fact, it cannot be doubted on comparing these two conversations that Drawbaugh meant in the fall of 1876 that he was then going to get it patented, and had then got it in a condition to get patented, implying that it was not before.

But this witness's whole testimony consists of nothing but a confusion of ideas. He testified on the redirect examination (p. 661):—

"*Q.* 14. In the second conversation, which you have spoken of, six or eight months after the first, when he told you he was going to get the talking machine patented, did he or not say that he then expected some one to help him?

"*A.* He spoke of having received assistance, or received some person to stand at his back, or something of that kind. I don't exactly recollect the words that he used."

Now in the fall of 1876, — six or eight months as the witness says after March, which would be somewhere along in October and November, — Drawbaugh had not received any assistance, or any promise of any, or any expectation of any, about the speaking telephone, but he had just received assistance and a person to stand at his back about his clock, to wit, he had just made an arrangement with R. E. Shapley, evidenced by a writing dated Nov. 8, 1876 (complts, i, 592), and in pursuance of negotiations which had been going on for about a month or six weeks, according to which Shapley, who had a couple of thousand dollars to spare, *was to pay for patenting a clock*, and to furnish means for carrying on that business, and had advanced $20 on account of it. It is perfectly clear that it was the clock the witness heard of. A good many similar instances are proved; no one can tell how many more exist. (See N. W. Kahney, No. 39, p. 288; Landes, No. 99, p. 660; Updegraff, No. 120, p. 1127; Rupp, No. 58, p. 454; Shettel, No. 28, p. 218; W. S. Dellinger, No. 59, p. 470; J. A. Moore, No. 97, p. 650.)

No. 100. *John K. Taylor*, p. 661. — Age, forty-five; Lower Allen township; has known Drawbaugh since 1846. Says that about the middle of September, 1867, Drawbaugh paid him between

two and three hundred dollars, if his memory serves him right, the balance of an old debt which Drawbaugh owed him for some years. He was once at Drawbaugh's shop, he says, with Ezekiel Worley, defendants' witness No. 34, p. 78, *supra*, and the witness thinks it was about 1873.

"*Q.* 8. Did he show you any talking machines at that visit?
"*A.* Not that I recollect of; he was telling us about his talking machine.
"*Q.* 9. What do you remember that he told you about it?
"*A.* I don't remember anything more, than that he was telling about the talking machine, — by electricity or something of that kind."
"*X Q.* 18. Did you ever have conversation with him about talking machines, other than what you have already stated?
"*A.* I think we had some the last year or so; before that I don't think we had, because I saw him so very little; the election is held at my place, and I would generally see him when he came to elections; I might have perhaps seen him between those times occasionally; I would just exchange a word or two with him, that is all."

The witness says he thinks they have had some talk together the last year or two. It is clear from this witness's testimony, given in 1881, that he does not pretend to have any knowledge on the subject until the alleged visit in 1873, and that, if he heard anything at that time, it came to him as new.

In the growth of memory which has been so remarkable on the part of defendants' witnesses in this case, they had the enterprise to produce on surrebuttal, in 1884, George A. Spangler (p. 463), who worked at Taylor's blacksmith shop about 1869, and who testified that it was common talk at Taylor's shop at that time. It seems a little ludicrous to produce a man in 1884 to testify that the defendants' own witness Taylor knew a great deal more about the machine, and knew of it a great deal earlier, than Taylor himself, testifying in chief, had the least idea of.

No. 101. *Wilson Bear*, p. 663. — Age, forty-one; Camp Hill; dealer in cattle. He was one of the Axle Company. His allegation is, first, that he was at Drawbaugh's shop in the fall of 1874, when he saw A. He was with Crawford, who says that Drawbaugh explained to them the instrument. (See Crawford, defts, i, 65;

p. 25, *supra*.) The witness Bear became interested with Kline in the axle patent in June, 1874, and the whole of his testimony about the talking machine is as follows (p. 664) : —

"*Q*. 9. Between the time when you became interested with Mr. Kline in that patent and the time when the affairs of the Axle Company were wound up [beginning of 1875 until summer or fall of 1876], did you know anything about Mr. Daniel Drawbaugh having a talking-machine invention?

"*A*. I know of him showing me, in one of the rooms of the building, a place in the building, as I remember that he did not invite every one into, to show his invention. I remember of seeing wires in this room. The recollection of them that I have is that they ran down through the floor; and I remember of seeing other machinery, and cannot say exactly what they were to be used for, as I take very little interest in patent rights. I have no doubt, as Mr. Drawbaugh has explained to me often about his inventions, that he spoke of his talking machines.

"*Q*. 10. Have you any recollection or impression on your mind of Mr. Drawbaugh's asking you to take an interest in his invention of a talking machine and furnish capital for patenting and introducing it?

"*A*. I have a faint recollection.

"*Q*. 11. What is your impression as to the time when you did that?

"*A*. At the time when we were manufacturing axles, — the Axle Company."

"*X Q*. 12. What explanation did he give you about his invention?

"*A*. Mr. Drawbaugh often explained to me about his inventions, and told me about them, but I was so little interested in these things that I really paid no attention to them, and can't tell now what his explanation was. I remember seeing one of his instruments."

This answer is very instructive. Here was a man who was at the shop, embarked in business there, the constant employer of Drawbaugh during the year before the Bell patent, and when pressed by the defendants to state whether he knew anything about Drawbaugh's having a talking machine, is only able to saw that he saw wires. Undoubtedly there had been wires there for the clock for several years, and for the telegraph instruments and hotel bells. He says that he saw some machinery in Drawbaugh's private office, but cannot saw what it was for, and then followed an answer which illustrates the state of mind of the community. The witness has been

so infected with local feeling that, although he has not the slightest memory of ever knowing anything about the talking machine, he is brought to such a state of mind that he is ready to say he supposes Drawbaugh must have talked to him about it, although he remembers nothing of the kind. The last phrase of his cross-ans. 12 does not, either impliedly or in terms, refer to the telephone instruments. He saw some machinery, he says, not knowing what it was.

This deposition is fatal to the notion that during the time of the Axle Company the shop was full of practical speaking telephones; that their existence was the chief topic of conversation in the neighborhood, and that Drawbaugh was burning to get everybody to go in with him.

No. 102. *William Senseman*, p. 668. — Horse trader; lived at Eberly's Mills from the spring of 1872 to the spring of 1873; during that time was at Drawbaugh's shop (p. 668): —

"*Q.* 6. Did he at that time, while you lived there, show you any of his talking machines?

"*A.* He did.

"*Q.* 7. Did he talk to you through any of them, or not?

"*A.* He did; through a small tube, or tin can, or something he had, from a small room up stairs.'

That is his description of what Drawbaugh talked through, and so far as that description goes it means a string telephone. It could be met perfectly well by a string telephone which might easily be run up through two or three stories.

He then testified: —

"*Q.* 10. Could you hear and understand through the machine what he said to you?

"*A.* I could hear, and some of the words I could understand.'

That is not a practical speaking telephone.

B, C, F and I, and none others are placed before him, and he is thus led to say that he thinks those were the machines he saw at the shop. And then when he is asked whether Drawbaugh was working and experimenting with these talking machines at that time he assents. But his recollection is vague (p. 670): —

"*X Q.* 19. Was it one of these instruments you put your ear to?

"*A.* That I can't say positively; you know it was in 1873.

"*X Q.* 20. Was the instrument you listened at like one of these four; if so, which one?

A. It was something of the kind; I wouldn't say positively it was one of them.

"*X Q.* 21. How did he come to talk to you on that occasion?

"*A.* I used to visit him, and he told me his idea was to convey sound, and *he thought he could do it;* that he had made different machines, but had never made anything out of it.

"*X Q.* 22 And it was after the talk between you about conveying sound, and after you and he had conversed several times about what he had done, that he talked through the machine to you, was it?

"*A.* Yes, sir."

Redirect by Mr. Hill.

"*Q.* 23. In your twenty-first cross-ans. you say he told you he had made made different machines, but had never made anything out of it; what kind of machines; talking machines, or other machines?

"*A.* That he didn't say."

That is not the language of an inventor who already for six years had had practical working instruments, — "he thought he could do it."

On redirect 23, he is asked whether it was talking machines or what kind of machines, Drawbaugh referred in that conversation. "Ans. That he didn't say." Then the witness is asked upon redirect examination whether he did not understand Drawbaugh, by the phrase, "never made anything out of it," to mean that he made any money out of it, and against objection he is amiable enough to assent to the proposition.

No. 103. *Wilson N. Miller*, p. 671. — His father ran the grist mill at Milltown from April, 1873, to April, 1874, and if the talking machine was so well known it is rather extraordinary that his father was not called by the defendants as a witness about it, but he was not. Witness says, that from June, 1876, to April, 1878, he was station agent at White Hill station (the station used by Drawbaugh); that from January, 1876, and during the time he was station agent he was also employed in his father's warehouse near the station; that

Drawbaugh used to go backward and forward from Mechanicsburg to White Hill.

It may be here remarked that it was hardly consistent with the notion of the claimant's poverty that he moved to a place six or seven miles away from the shop and paid to ride back and forward every day. The witness then says (p. 672) : —

"*Q* 20. Do you recollect the fact of his showing you a talking machine that he had in his hand, as he was about to take the train at one time, while he lived at Mechanicsburg?

"[*Objected to as leading and assuming.*]

"*A*. He had a talking machine one evening, as he took the train to go to Mechanicsburg.

"*Q*. 21. Did you have any conversation with him about it at that time?

"*A*. Yes, sir; but I don't remember what it was.

"*Q*. 22. While he was living at Mechanicsburg, did you have any conversation with him about furnishing a talking machine for you for use for your business purposes?

"[*Objected to as leading.*]

"*A*. Yes, sir; he said he would put up a line between White Hill and Shiremanstown, if I could get use of the poles.

"*Q*. 23. What poles?

"*A*. The telegraph poles along the railroad.

"*Q*. 24. For whom did he propose to put that line, for whose use?

"*A*. For our use — in my father's business.

"*Q*. 25. Where were the instruments to be located?

"*A*. Nothing was said about that; I was to have one at White Hill, and my father was to have the other at Shiremanstown; but nothing was said as to whether the instrument was to be put in the station or warehouse.

"*Q*. 26. State the substance of that conversation, as nearly as you remember it.

"*A*. I asked him about what it would cost to put a line up there, and whether he thought that we could use it that distance; he said we could, and a great deal further than that; he said he didn't know at that time what it would cost; he said afterwards that it would cost $25 or $30, if we could get the use of the poles; I promised him I would find out whether we could get the use of the poles, and at the same time I was doubtful whether I would stay there any length of time; I never made any inquiry about the poles; he asked me several times whether I saw those parties about the poles; I told him I did not, but kept him under the impression that I would.

"*Q*. 27. Who was to furnish the wire and the instruments, in case you got possession to put up the line?

"*A.* He said he would furnish everything — Drawbaugh.

"*Q.* 28. Prior to his showing you the instrument at the railroad station, had you ever had any conversation with him about his talking machines?

"*A.* Yes, sir; but I was so little interested that I don't know what it was any more; I might say, that my business there was about some money that he owed my father for coal; in the conversation I found that he had no money, and I didn't ask him for it.

"*Q.* 29. Referring to the time when he showed you the talking machine at the railroad station, do you remember whether that was about the time when he first began to live at Mechanicsburg or not?

"*A.* I don't remember.

"*Q.* 30. Referring to the time when you first talked about putting up a line from White Hill to Shiremanstown, do you remember whether that was about the time when he first began to live at Mechanicsburg or not?

"*A.* I don't remember; it was in the summer, but I can't remember what month.

"X *Q.* 31. Please to describe the instrument you say he showed you at the station.

"*A.* I don't know whether I can, exactly.

"X *Q.* 32. Tell me what you remember about it.

"*A.* It was a small wooden box with a tube to it to talk in; as near as I can tell it was about five or six inches across and about an inch and a half thick."

We have got, first, the fact that at this time when speaking telephones were making a great deal of noise in the world, the conversation that Drawbaugh had with him about his own instrument was such that the witness does not seem to have been instigated to take any step to get the use of it. The whole of this witness's testimony is immaterial, because he does not profess that anything he knew was before June, 1876. The strongest statement he makes is that it was between June, 1876, and April, 1877, though perhaps he qualifies that somewhat by saying that it was in the summer, though he cannot remember what month. His description of the instrument alleged to have been shown to him, given in ans. 32, does not directly identify it, but seems to point more towards A than towards any of the other instruments. In ans. 32, p. 675, he says it was a small wooden box with a tube to it to talk in; "as near as I can tell, it was about five or six inches across, and about an inch and a half thick." Now, if at any time, even in the summer of 1876, Drawbaugh was going around with A to show, it is certain that he had not got D and

E; they are very much better instruments than A, for Drawbaugh so states, and that is a fact. They have permanent magnets; A cannot be used as a transmitter at least without a battery, and it is inferior as a receiver.

But the date of the conversation of this witness is afterwards established to be a good deal later; he testified on direct examination as follows (p. 675): —

"*Q.* 28. Prior to his showing you the instrument at the railroad station, had you ever had any conversation with him about his talking machines?

"*A* Yes, sir; but I was so little interested that I don't know that it was any more; I might say that my business there was about some money that he owed my father for coal; in the conversation I found that he had no money, and I didn't ask him for it."

It is clear from this that he first had a conversation with Drawbaugh at some time when he was at Drawbaugh's shop about some money which Drawbaugh owed his father for coal, and that that conversation was before he saw the instrument at the railroad station. Now we can fix the date of that first conversation by a writing. Drawbaugh, in his deposition (defts, ii, 896), seeking to account for the use of some of his money which he had not spent on a talking machine, produced his printed advertising bill head. On it is written a receipt for coal and freight, $12.20, paid by Drawbaugh to J. R. Miller, and receipted for by W. Miller, the witness. It was written on one of Drawbaugh's printed bill heads, and was therefore, of course, written at Drawbaugh's shop. Drawbaugh (x-ans. 1756, 1757, defts, ii, 1118) does not remember when the bill was made nor the circumstances about it, except that Miller came to his shop to ask him for money. We called this same witness Miller, had him produce his father's books, and proved by him and them (complts, ii, 1198) that the only amount charged in the books from the beginning of 1876 to the spring of 1878 against Drawbaugh was $6.31 for three little lots of coal, the first of which was delivered Dec. 14, 1876; and all this was paid for at one time, April 4, 1878. It would rather appear that the coal and the freight, $12.20, in the bill of April 3, was paid for in cash at the time, because it did not get charged in the book. The witness kept the books of his father.

The defendants, in surrebuttal, recalled him (p. 398) and proved that there were two transactions with Drawbaugh, the coal charge amounting to $6.31, and the other charge of the bill $12.20, but they did not suggest that Drawbaugh had bought and charged coal or anything else before the entry of Dec. 14, 1876. It is certain, therefore, that it was not until after Dec. 14, 1876, and presumably, from the accounts, not until after November, 1877, that this witness went to Drawbaugh's shop to dun him for money due his father, because he never owed his father any until after Dec. 14, 1876. It is clear, therefore, from these papers, that the time when he went to the shop about the money which Drawbaugh owed his father for coal must have been after Dec. 14, 1876, and probably in the spring of 1878. His express testimony, on direct examination, is that the instrument shown him at the railroad station, of which the witness continued to be the keeper until April, 1878, was shown him *after* hat visit to the shop (ans. 28, quoted p. 221, *supra*). Now it is altogether satisfactory to complainants that the defendants should prove that in the summer season of 1877 Drawbaugh was showing A to persons whom he wanted to have take and use his talking machine.

This is one of those instances pretty frequently met with where the statement of the witness as to what took place is possibly true; where the date of the occurrence, resting, as first stated, merely on memory, and more or less favorable to the defendants *if at the date alleged*, is shown by clear written evidence, and by the *necessary* and logical connection of facts, some of which are fixed by written evidence, to be at a period so much later than that testified to by the witness as to be inconsistent with the claimant's story. The continued recurrence of these instances not only destroys the value of the witnesses directly affected, but shows the worthlessness of all that class of testimony, for when we get an opportunity to really apply a test, we find, in instance after instance, that the effect of the deposition is destroyed, or else it becomes proof favorable for the complainants. We have a right to judge the whole by these frequent samples.

Miller and his father are good witnesses for complainants in another way.

If Drawbaugh had had a talking machine while the witness's father run Eberly's Mill, 1872–3, the witness himself and his father

would both have known of it. The *facts* that his father had the mill, was not called, and that the witness knew nothing of any alleged telephone before the date of Mr. Bell's patent, were proved on the defendants' proofs in chief. The defendants recalled this witness in surrebuttal (defts, surbtl, 398), and the moment the complainants directed attention to this point the defendants felt its weight so seriously that they directed the witness not to answer our questions, and did not dare to put any question to break the force of it.

No. 104. *William L. Gorgas*, p. 676. — Drawbaugh's claim is that he had practical speaking telephones as early as 1867 or 1868, and continually during the time of the Faucet Company. The testimony for the defence, especially that introduced in surrebuttal, if it be worth anything, amounts to an assertion that he had practical speaking telephones and that their existence and presence in his shop was well known, and was the subject of common talk in the community in 1868, 1869 and 1870. A number of witnesses were produced merely for the purpose of testifying that they heard it spoken of. Now the first persons to inquire of whether this be true or not are obviously the members of the Faucet Company and those who worked for them in that shop. This matter has already been alluded to in the body of this brief. The present witness was one of the members of the Faucet Company, or "Drawbaugh Manufacturing Company" as it finally became; his father, William R. Gorgas, was another. The father was the treasurer of the company, and the son was the bookkeeper, timekeeper and superintendent for a considerable part of the time and up to Sept. 16, 1869. The son, W. L. Gorgas, is now called to prove the money transactions between Drawbaugh and the company, and throughout his whole deposition, which extended over two days and covered twelve printed pages, *the defendants did not once say telephone to him.* There is not a hint of it in the whole of his deposition, — question or answer. He not only was occupied with the company in the manner stated, but his father was one of the wealthiest men in the neighborhood of Drawbaugh's shop, being worth about $90,000 (see deposition of George W. Mumper, complts, ii, 1101), living less than a mile from

the shop until the fall of 1877. Up to 1875 or 1876, Luther Gorgas, the son, lived with his father all or most of the time. We must take it then that this gentleman, a constant and daily attendant at the machine shop after September, 1869, who with his father put about $6,000 into the pump company, as well as his father, a man of large means, living near Drawbaugh, never knew anything about the existence of the alleged talking machine. Subsequently, and in surrebuttal (p. 1128), the defendants called the father also and *did not once say telephone to him in his deposition.*

These two depositions, together with those of other members of the pump company and the workmen of it, leave not the slightest doubt that the talking machine was a thing unknown to the members, officers and workmen of that company; and that, being an established fact, there can be no doubt that it did not then exist, and that all the story of the common rumor and report about it is false. It will be remembered that William L. Gorgas and his father, and a number of the others called, are not the complainants' witnesses; they are the defendants' own witnesses. They are not only men who were known as connected with the pump company, but they were men who, from their position and means, would have been applied to by Drawbaugh if he had anything likely to interest a capitalist.

The payments to Drawbaugh actually made in cash by the company, as stated by Mr. Gorgas from the books, were (pp. 682, 683):

Sundry payments in 1867	$115.00
" " " 1868	13.20
" " " 1869	37.39
" " " 1870	13.68
" " " 1871	62.58
" " " 1873, July 19, being division of proceeds of sale to Haucks	425.00
Final division May 1, 1876	51.13
	$717.98

His assessments as a shareholder were (p. 679)	$2,186.33
Of this he paid in cash	$1,210.00
" " in labor, etc.	976.33
	$2,186.33

In addition to this he received from this concern for certain rights under his patents: —

Cash (defts, ii, 871)	$5,000 00
Stock at the price actually paid by others . . .	1,000 00

Thus his total receipts in the matter of the faucet company were: —

Cash	$717.98
Earned for labor	976.33
Price for which he sold his remaining interest in his patents (v. p. 195, *supra*)	6,000.00
	$7,694.31

Received as follows: —

Actual cash	$5,718.98
In stock, with assessments paid	1,976.33
	$7,694.31

This stock, with the assessments paid, of course constituted property on which he could meanwhile borrow.

Now, one would hardly call the recipient of this "miserably poor" during the years when it was coming in, nor while he owned the double house and blacksmith shop which he bought with the money.

Upon cross-examination the witness gave a list of the persons who were members of the company, nine in all (defts, i, 686), and states that at times they had as many as eight hands employed; gives the true date of Hoffman's work, which is already stated in the abstract of Hoffman's deposition (p. 136, *supra*), gives the date of work for the Mill-Bush Company, and that Drawbaugh was the mechanic and designer, $5.00 a day being charged for his time; gives the date of the sale of the tram to Zacharias & Son already referred to, and finally furnishes the bill head of the company, the advertising part of which is as follows (p. 688): —

"Drawbaugh Manufacturing Company, Box 46, Shiremanstown, Pa. Manufacturers of Drawbaugh's rotary power pump for mining and factory use, etc., Drawbaugh's self-measuring faucet, for drawing and measuring molasses, honey, tar, and all other viscid liquids;

also stave cutters, stave jointers, mill trams, hydraulic rams, etc. All kinds of job work, and building of special machinery solicited and attended to promptly. Circulars and price lists mailed on application."

This corporation, "The Drawbaugh Manufacturing Company," was organized in 1870 (complts, ii, 1129). This bill head, therefore, was not printed before that year. All the contrivances named in it were of his devising. He was the master mechanic who designed the "special machinery," the building of which they solicited. The corporation was named for him, and was got up to manufacture things of his invention. What folly, therefore, to pretend that he had then possessed for three years practical speaking telephones, and that the whole community knew that he had, and that he was trying to get some one to make them, when this company, searching for inventions of his to manufacture, had never heard of them.

See for this the body of the brief and abstract of deposition of complainants' witness, H. S. Rupp, *infra*.

No. 105. *Amos Frownfelter*, p. 690. — This witness was called to say, probably to aid the defendants in fixing a date, that about the first of September, 1874, he hauled away the ruins of an old sawmill from Milltown. We ascertained afterwards that Mr. Frownfelter lived for a long time at Milltown in the house nearest to Drawbaugh's shop, and upon visiting him it was ascertained that the defendants had privately inquired of him and his son whether they knew of the alleged talking machine, and finding they did not, had asked him no questions about it on the witness stand. The complainants naturally called both of them (complts, ii, 1225, 1229), and it appeared that the opportunities of both for knowledge were quite good, especially on the part of the son; but they never knew anything about it and had never heard of it.

No. 106. *Michael N. Grove*, p. 691. — He was the last member of the Axle Company called, and according to the law of growth which has been observed in the defendants' proofs, he testified a little more freely than the others. He says that while connected with the Axle Company, and before February, 1876, Drawbaugh showed him

"a kind of box arrangement" through which you could talk to Pittsburg. "I didn't take much stock in it nor pay much attention to it" (p. 691). "The remark that you could hear to Pittsburg is about the only thing that I recollect of." He afterwards thought that this occurrence was in the spring of 1875. Now among all the instruments produced there is nothing which even outwardly corresponds to that in description. Afterwards, under the influence of a question so leading that after it had been written and read to him, and he had had the full benefit of it, the defendants' counsel felt that they must withdraw it and substitute one not quite so strong, he was induced to assent to the proposition that the instruments that he saw were A and D; and that is all he knows about Drawbaugh's talking machine. It is perfectly certain from that that Drawbaugh did not have a successful instrument which was a matter of common talk in the community, exciting great interest, and habitually shown and talked through to everybody who came there. The witness, however, on cross-examination, p. 698, shows that his memory is perfectly worthless. Being cross-examined about the occurrences of the years 1875 and 1876, as to his own whereabouts, where he lived, what his occupations were, he could not tell the same story twice over, and got entirely mixed up, even about his own affairs.

[*Defts, vol. ii begins here.*]

No. 107. *Henry Herr*, p. 695. — Age, fifty-three; Harrisburg; farmer. Has known Drawbaugh since 1869. Was inquiring at that time for a man who understood putting in a ram and was directed to Drawbaugh. He says that while at the shop Drawbaugh drew his attention to a machine which he called a talking machine, but he cannot say at what period this was. Drawbaugh seems to have selected him as a credulous person and told him that he had invented the injector, which in another deposition was explained to mean the Giffard injector, and that other parties had got ahead of him; and at this interview Drawbaugh told him that he had invented something to take the place of the telegraph. The witness says that he has no record of any kind, but after a series of questions is led to say that he thinks it was in the year 1869 that he heard this. He says that the instrument shown him was quite a small affair, with a wire or cord leading from it. Is not sure whether the machine was

used while he was there. He was not interested in it, and he urged Drawbaugh to stop and go on with his work. He thinks that Drawbaugh drew his attention to it every time he came there. Said that he was poor and could not raise the means, "but if I would help him or get anybody to help him he would give a half interest in it" (ans. 11, p. 695). When he tries to describe the thing that he saw he fails, but upon B and F being put into his hands he thinks that he saw something like these. During the latter part of his examination he thought that he saw an instrument like "C reproduced." Those were occasions when he went for repairs to his ram.

His impression, as he conveys it to the Court, is that he went from time to time, and indeed quite frequently, to Drawbaugh's shop to get repairs done, that Drawbaugh would neglect them for the sake of working at the talking machine.

His cross-examination shows, although he does not perhaps swear to it with literal positiveness, that he got his idea about Drawbaugh's ram from a cousin, Harry Neidig, a neighbor of Drawbaugh's, who had a Drawbaugh ram. The questions put to him by defendants' counsel (redirect 46, p. 701) imply that the defendants' counsel understood at the time that the witness's testimony meant that his cousin, Harry Neidig, had the ram before he went there. He states that he paid Drawbaugh between $65 and $68 for the ram and pipe.

"When anything would come into his mind about it [the talking machine], he would let everything go and leave my work; he would drop my work while I was there, and he disapponted me several times that I had to go back again; he said he worked day and night at this other machine" (cross-ans. 29, p. 698).

It is a little ludicrous to look at this picture of Drawbaugh working night and day on the talking machine, and then consider that his utmost claim is that between the beginning of 1867 and the summer or fall of 1874, he made four instruments, — F and B and C and I, — the whole of which would hardly be more than three days' work, certainly less than a week's; not another instrument or part of an instrument produced is alleged to have existed during that period, nor does any witness describe or refer to any other as existing during that time, except certain references to a box, *q. v.*, p. 197, *supra*.

We thereupon called the witness's cousin, Harry Neidig, who testified in substance that Herr put in a Drawbaugh ram after Neidig put his in and in consequence of what Neidig told him; and the bill for Neidig's ram, produced by him, states that his ram was furnished in 1871 (complts, ii, p. 1522, ans. 20; ans. 25–32, pp. 1523–4); Herr said that when he went for the ram they were working on faucets; they were in 1869 and also in 1873, though some might have been seen there possibly in 1871–2; Herr, who only went to the shop two or three times, professes to know that there were telephones there; Harry Neidig and his son Jacob (complts, ii, 1235) were frequently at the shop and in the village, and Drawbaugh did considerable work for them, but they never heard that he had a talking machine until after they had become known elsewhere. In spite of this testimony neither Herr nor Drawbaugh can produce or give any more testimony to explain this contradiction.

No. 108. *John Wolf*, p. 701. — Age, seventy-five; Camp Hill, two miles from Drawbaugh; has resided in the neighborhood and known Drawbaugh for upwards of thirty-five years. Between Feb. 20, 1875, and June 10, 1875, chiefly in March and April, he did some teaming for the Axle Company and delivered about eleven loads or parts of loads for them at Drawbaugh's shop. If his story be true, he saw on these occasions more telephones than all the members of the Axle Company put together saw during the whole year.

It was part of Drawbaugh's duty to help the witness unload the machinery, but the witness had to "urge him on the best way he could" to help him unload.

"*Q.* 10. Did he show you the talking machines, or any of them?

"*A.* Yes, sir; he showed me some. I guess he would have showed me more, but I was in a hurry with the hauling; he was employed to help me in unloading, and I urged him on the best way I could.

"*Q.* 11. What was he doing when you had to urge him on to help you?

"*A.* Most of the time he was in his room at his talking machine working; sometimes he was in the shop where the lathes were to be put in, ridding out that.

"*Q.* 12. Did he talk to you through the machine?

"*A.* No, sir."

According to the claimant's story he and Harmon were then just finishing D and E, and were not working on any other instruments. This witness saw him working, and would therefore have seen D and E, if they existed. He testifies (p. 703) :—

"*Q.* 7. In those conversations was anything said about a talking machine?

"*A.* It was either the first or second load I brought there, I am not certain which, that I had to go into his room or shop where he has his instruments to work, to find him. He showed me a thing there. Says he, "I am working at a talking machine here, and if I can get it accomplished or had the means to get it accomplished I would be a rich man."

Yet *the witness did not see D or E.* He thinks he saw B on the bench (ans. 21, p. 704) ; says he saw C, and that a magnet like that of "C reproduced" was lying on the bench (ans 22).

When the witness went into Drawbaugh's room to get him to help unload a grindstone, "he was working at a wheel" (ans. 19, p. 704). This "wheel" was (p. 705) :—

"*Q.* 23. Look at this machine A, which I now show you, and state whether you saw that there, or anything like it, at that time when you were hauling the lathes or grindstone?

"*A.* Yes, sir; I saw such a wheel, pretty much like this, A, at that time.

"*Q* 24. Answer the same question as to these two machines D and E.

"*A.* *I can't recollect of seeing these:* they might have been there, but I don't recollect of seeing them; there was always so much lying on his bench that it was crowded all the time with one fixture and another."

This testimony will not help out the story that A was finished two months before, and that D and E were just being completed. He would have shown them to the witness if he had had them; for, if the witness tells the truth, and is right as to dates, Drawbaugh talked to him a good deal about the machine (p. 703, ints. 6, 7, 8) ; but after he had said that he never saw D and E, the defendants' counsel got him to say that he did not take much interest in the matter.

But one answer escaped the witness which showed how bad was his memory and how careful his training about dates (p. 705) :—

"*Q.* 26. Did he tell you at that time whether he could talk through his machines; and if so, how far he could talk through them?

"[*Objected to by Mr. Storrow, as hearsay and incompetent.*]

"*A.* Not as I can mind of.

Q. 27. Did he say anything about the telegraph in connection with the machine?

"*A.* He told me at one time, but I don't recollect whether it was at the time of the hauling, *or at a time when I was in since the hauling;* he told me that if he had it in operation right once, he could talk across the ocean."

There was an admission that at some indefinite, unknown and half-forgotten time *afterwards*, he had talked with Drawbaugh about the talking machine. The examining counsel tried to lead him out of that, so far as could be done, by the following question and answer (p. 705): —

"*Q.* 28. I understood you to say that you had no conversation with him about the talking machine at the time when you were in there since the hauling; do you now think that you may have had conversation with him about the talking machine at that time?

"*A.* I think it must have been at the time of the hauling."

No. 109. *Joseph C. Jeffries*, p. 707. — This witness first knew Drawbaugh in the fall of 1876; his testimony, therefore, is worthless as against the Bell patent. It is put in apparently as proof to show the existence of H at that time; it is not worth while to spend time in discussing it for that reason.

No. 110. *John T. Smith*, p. 713. — Bought a hydraulic ram from Drawbaugh in June, 1872; produces the bill. The price of the ram was $15; the pipe and labor brought the whole up to $107.35. This witness gives a deposition, which, taken at first sight, without criticism, looks like swearing to E and H; when we come to look a little at the details of it, and to criticise it, it is nothing but a mass of absurdities. In the first place, in answer to int. 4, he says that the last time he was ever at Drawbaugh's shop was on the Pennsylvania day of the Centennial, which was Sept. 28, 1876 (p. 713); that during one of his visits before that Drawbaugh showed him a machine (p. 714),

"like this here pretty much (taking up E); it had two cords on, one green and the other red. He said it was to throw sound

through, or speak through; it was not these, but pretty much like them; the cord had wire inside with cord wrapped round it; that was all I saw at that time, and then about the same time I saw the box H" (ans. 8, p. 714).

Further on the witness says (p. 715): —

"*Q.* 16. One of the machines that you saw was like this one E?

"*Ans.* Yes, it was like it; but I saw the very one this morning down to Mr. Jacobs's office, and I will step down and get it. (Witness returns with N and continues.) This is the one.

"*Q.* 17. How do you distinguish this one N as the one that you saw?

"*Ans.* By these here two strings (taking hold of the wrapped wires of instrument N).

"*Q.* 18. Do you recollect that the size and shape of the instrument was like N?

"*Ans.* Yes, sir."

The part of this which must have been painful to the defendants is that N, which does have two cords, one green and the other red, and is the only exhibit with colored cords, was one of Drawbaugh's *latest instruments*, and, according to his own story, was not made before 1878 or 1879; and the witness swears that he never was there after 1876.

Then comes the question of dates; in answer to int. 7 he says he thinks that he was at Drawbaugh's shop "about four times"; the first time when he was down to get the ram, "and about three times after, when it was out of order." He clearly got the ram June 13, 1872, for that date is given by his bill. He says (x-ans. 25), that the ram first broke down "in about eighteen months," which would be December, 1873; that would be about the date of his second visit. It broke down again "not quite a year after that (x-ans. 26)"; November, 1874, would therefore be about the date of the third visit. And the last visit he had already testified to was September, 1876. He testified (Ans. 9) that he saw the large machine H "between the first and the last time, but before the last time, as near as I can recollect," and that he saw talking machines.

"so far as I can remember, a couple of times; sometimes he was pretty busy when I was in the shop and did not show it to me" (ans. 15).

Now the visit "before the last" — that is, the third — was November, 1874, according to his chronology, and there is not a pretence that H existed until a number of years after that. This interesting witness therefore saw H several years before it is pretended that it was made, and he saw N several years before it is pretended it was made, and he never saw any others at any other time. We are content to take him as a sample.

No. 111. *Abraham Fisher*, p. 716. — Sixty years; keeps "a summer resort." This witness is also unfortunate about his dates. He testified quite vigorously that he first went to the shop with his cousin, Mr. Hursh, connected with the Drawbaugh Manufacturing Company, and saw F and B during the time of the Faucet Company. There are two Hurshes; one of them positively denies seeing anything of the kind; the other was not called. He then says that he got a hydraulic ram from Drawbaugh in the latter part of May, 1874, and that he has verified this by looking at his books or memoranda made at the time; but he does not produce these books or memoranda. He has never been at the shop since. Says that when he got the ram in May, 1874, Drawbugh spoke about his talking machine; he saw different machines, and A was one of them. Drawbaugh said that he had made application for a patent, or was going to. The ram cost $60; the ram itself was less than half that, being $15 or $18, and the rest was for pipes and labor.

This witness got into trouble later in the case. The defendants, having first had Wesley Smith swear that he saw Drawbaugh making the instrument A in November, 1874 (defts, i, 80), afterwards tried to prove its existence in the summer of 1874; and this witness seems to have been brought to the point of swearing that he saw it at the visit, which, he states, was in May, 1874. No other witness alleges so early a date for it.

In Drawbaugh's deposition in the faucet interference case, given in 1879, he testified as follows (complts, iv, exhibits, p. 148): —

"Here is a sketch of a machine I got up for supplying steam boilers with feed water. I know that is more than four years ago; here is a memorandum in the same book: 'A. Fisher, Dr., June 7, 1873, $64.90.' I know the circumstances: I wrote that when I was in a stage coming from York Springs to Harrisburg. That is the day."

And then Drawbaugh, in cross-examination (x-ans. 1441, 1442, 1443, defts, ii, 1058), had to testify that this was the same Abraham Fisher, who testified, and that was the charge for the only ram he had. So Mr. Fisher's date is pushed back to June, 1873. Thereupon the defendants felt obliged to recall Mr. Fisher (defts, ii, 1161), and get him to explain himself, because he had sworn that he fixed the dates by a memorandum which he did not produce. Upon being recalled he testified that the complainants' counsel wrote him asking him what the memoranda was, and to send a copy of it. It turns out that he had no bill of the ram, nor any memorandum about it, but that he thought in his mind that he put it in at the time when a certain Jacobs worked for him, and that he thought this Jacobs worked for him in 1874, and upon talking it over with his family and some of his neighbors he so concluded, and that that was the memorandum he referred to. It is a very nice frame of mind for a witness to be in to swear positively that he has a memorandum which verifies the date of his ram, when what he means is that he has a memorandum of the time of a particular person whom he *thinks* worked for him at the time the ram was put in. The witness next testified that upon receiving another letter from complainants' counsel asking again for a copy of the alleged memorandum, and upon talking it over with his wife and friends, he came to the conclusion that he had employed Jacobs in 1873 as as well as in 1874, and now thinks that he got the ram from Drawbaugh in 1873. But this leaves him in a bad predicament; in the first place, *the instrument* A *which he swore to is not pretended to have existed in 1873.* On the contrary, its existence is absolutely disproved by the defendants themselves. Their witness, Henry Baylor, whose testimony *they* must take as true, — although its worthlessness has been proved (p. 47, *supra*), — testified that Drawbaugh, in June, 1873, showed him instruments which must be assumed to be the best he had, — because it was while soliciting him to put money into the talking machine, — and the instrument then operated for him was the tin can receiver B. Of course that is conclusive proof that the much better instrument A did not exist at the time.

What shall be said of Mr. Fisher? Was he brought into such a state of mind that he was ready to swear to the instruments which,

according to their schedule, were appropriated for the year he thought was the year of his visit; or is his whole testimony to be taken as pure fiction? He was not there in 1874, and he certainly did not see A in 1873. Again, what is to be thought of Drawbaugh, who had a memorandum, — and only eighteen months before had testified to it, — showing that Fisher's visit was in 1873, and he let him go on the stand and swear to 1874, and to the instruments as of that year? What is to be thought of Drawbaugh's memory or his truthfulness when he puts this witness on to swear that Drawbaugh showed him A, when it is perfectly certain he never did?

No. 112. *H. N. Hubler*, p. 720. — Age, forty-one; Harrisburg; foreman car builder at the Harrisburg car works. Says that in the fall of 1873 he was teaching music at Eberly's Mills, once a week, for about four months, beginning about Nov. 1. While there he says that Drawbaugh showed him I, B, F, and C, and he is not sure about A; there was then a magnet on C.

He didn't talk through the machine but "said he had talked to others"; he said "the wires were out of order" at that time; "said that he had it about completed and was ready to have it patented; he said he did not have means hardly to do it, but would have to find some way to push it through."

Two of his children attended the singing school; the price was a dollar apiece; he said it would be convenient for him not to pay in advance, and he paid near the end of the quarter.

This was merely one of the casual visitors, who professes to remember seeing some instruments; did not hear them talk; does not say whether he has ever been there since or not. The story that the *wires* were out of order is of course nonsense, because it is obvious that Drawbaugh could, and it is alleged that he constantly did, merely attach them with a couple of wires carried through the open doorway, and it is also alleged that he had wires constantly in his shop ready to experiment with. Upon cross-examination this turned out that of the two "children," one was the claimant's nephew, Hiram K. Drawbaugh, and the witness said that Daniel Drawbaugh subscribed and paid for him. The proof of poverty was not quite so good as the defendants expected.

No. 113. *Mrs. Lydia Drawbaugh*, p. 721. — Wife of George W. Drawbaugh, nephew of the claimant. She says that in September, 1872, she was in Drawbaugh's shop with her sister, Mrs. George Free, and a third person, whose name she does not remember. Mr. Drawbaugh did not talk to her through the talking machine.

"*Q.* 5. Did he talk to the others of your party through the machines at that time?
"*A.* I did not hear him."

He was showing the machines to some person, and she was looking at some drawings on the wall; but she says she saw the talking machine. She was married to George Drawbaugh in 1867, and has lived in Milltown ever since.

This is the niece of the claimant, and she has lived in Milltown alongside of him during the whole period that he had this "practical talking machine," and this is all she knows about it. She is not asked whether she ever heard it spoken of by others. It is pretty significant that they call her,— the wife of the nephew,— who really knows nothing, and that *they did not venture to call Mrs. Drawbaugh, the wife of the claimant, who, if their story be true, must have known all about it.* They have called witnesses to prove what Mrs. Drawbaugh is said to have said, but have not called her to tell what she knows.

No. 114. *Mrs. Mary Free*, p. 173.—Wife of George Free, the witness (No. 68, p. 139, *supra*). She says that she went to Drawbaugh's shop with her sister, Mrs. George Drawbaugh, in September 1872; that she heard Drawbaugh say through the machine, "good afternoon, ladies," and other words which she has forgotten, and that she could plainly hear through the machine what he said; that the machines were connected with wires, and Drawbaugh said that it was electricity that conveyed his voice; that she even recognized the voice as being his voice.

There is nothing at all to fix dates for either of these witnesses. Mrs. Free has lived at White Hill, a mile away, for years and years. Her husband, George Free (No. 68, defts, ii, 505), does not pretend to have any knowledge of any talking machine before the time when he alleges he saw one in the summer of 1875, though he pretends that after that Drawbaugh constantly spoke to him about it. It is not a

very credible story, that Free's wife should have known of it and talked through it in 1872, and Free never know anything of it — living within a mile of Drawbaugh, and connected with his family by marriage — until three years after that.

No. 115. *George Leonard*, p. 725. — Age, seventy-one; New Kingstown; resided at Eberly's Mills from the spring of 1871 to the spring of 1878. He owned and, during the larger part of this time run, the grist mill, and also owned a third of the houses in town. He was a friend of Drawbaugh; they went to the Centennial together. Apparently he was a man of ready means, and from time to time he lent money to Drawbaugh. Such a man would have well known of the talking machine if it had existed; he would have been applied to to furnish money as a loan, or otherwise, to patent it, if the claimant's story had been true. He would have known of it as a matter of universal talk in the village during all those years if it had been a matter of general notoriety, as the defendants assert.

He is the defendants' witness; taking what he says in comparison with what he would have known and been able to say if the defendants' story were true, his testimony proves that they do not, and that the positive facts are such that they cannot make out a case.

He was called by the defendants upon two topics, — the claimant's alleged telephones and the claimant's alleged poverty. He alluded to the latter only in general terms, and having afterwards ascertained that he was ready to lend and did lend money on the sole credit of Drawbaugh's name, we called him to prove that, and other similar positive facts (complts, ii, 1199, No. 73). When we had him on the stand for that purpose only the defendants cross-examined him about telephones, making him again, of course, their witness. In their surrebuttal the defendants called some of their witnesses to refer to him in connection with telephones (M. H. Natcher, defts, surbtl, 136, 137), and, not having much faith in such second-hand proof when the more direct is available, we called him in rejoinder, and *he denied that story* (complts, iii, 2298).

He and Drawbaugh went to the Centennial together about the middle of October, 1876 (ans. 14, p. 727, Drawbaugh; ans. 387,

defts, ii, 858). All that Mr. Leonard knows about telephones is contained in the following: —

In his first deposition, under direct examination by the defendants (p. 727): —

"*Q.* 16. Had Mr. Drawbaugh ever said anything to you about his talking machine before you went with him to the Centennial, and, if so, when, as near as you can recollect?

"*Ans.* I heard him talk that he was working at a talking machine some time between the years 1871 and 1876, and I heard some of the neighbors saying, too, that he was working on such a thing, but I never saw it; he told me himself that he was working at it, but I cannot say I ever saw it; I may have seen it, but I cannot say I did, because I took no interest in it; I did not understand the thing: it was not in my line of business."

When called for the complainants he was not asked on direct examination about telephones, but the subject was opened by the defendants on cross-examination, and the result of a couple of pages was the following question by the defendants and answer thereto (complainants, ii, 1209): —

Re-cross Q. 49. Is it still your best recollection and belief that he spoke to you about it before the beginning of the year 1876?

"*Ans.* I wouldn't like to confine myself to more than between the years 1872 and 1877. In the first year, 1871, I was a stranger, and was very little at the machine shop, as my mill was out of repair and credit, and needed all my attention. In 1873 I was away a good deal; it was between 1872 and 1877 that it was spoken of that I heard it."

Michael H. Natcher testified for the defendants in surrebuttal that his father, W. Natcher, was Mr. Leonard's miller in 1872, moving away from the village in August, 1872. He had testified for the complainants, but the defendants procured him to return under circumstances which destroyed his character, to contradict himself and to contradict their own witness Leonard. Natcher said (defts, surbtl, 136, 138): —

"*Q.* 5. Whom did you hear speak about the Drawbaugh talking machine [in 1871, 1872]?

"*Ans.* I heard my brother, George Natcher, and my sister, Bella Natcher, and my mother and Mr. Leonard."

"*Q.* 14. You have spoken of your brother and sister and Mr. Leonard speaking to you of the talking machines at the time you

lived at Eberly's Mills. I wish to ask you whether or not the talking machine was spoken of by others in the community at that time?

"*Ans. Not more than Mr. Leonard.* He said that Mr. Drawbaugh had a talking machine, and we ought to have one in the mill to the house."

Whereupon Mr. Leonard testified (complts, rejr, iii, 2298): —

"*Q.* 4. Did you ever say to either of the Natchers, or in their presence, that Drawbaugh had a talking machine, and that one of them ought to be put in from the mill to the house, or anything to that effect?

"*Ans.* No, sir; I never did to no living person, *because I knew nothing about it at that time.*"

Of course if by such an incident or by any other Drawbaugh had ever brought a talking machine to the attention of Mr. Leonard, his own witness, the fact would have been brought out in Mr. Leonard's examination or in Drawbaugh's deposition. Drawbaugh did not pretend that Leonard had any knowledge on the subject.

Poverty. The defendants called Mr. Leonard chiefly on the subject of the claimant's alleged poverty, and his testimony in his deposition was that Drawbaugh bought flour and occasionally hog feed from the mill. He would very often pay part in cash and part would stand on credit. He was often in debt to the miller for flour and feed; and the witness says that he asked him for money at the end of every year and tried to settle up with him; but Drawbaugh would say that he hadn't the money. Still they went to the Centennial. This about Drawbaugh's finances was hardly more than a mere opinion on the part of Mr. Leonard, and we finally recalled him ourselves (complts, ii, 1199), to get at the actual facts of the case; and they are interestingly subversive of the story put forward by Mr. Leonard, put forward by him probably with very little thought and consideration, and without having his attention properly drawn to the real facts of his own dealings.

We caused Mr. Leonard to put in his actual accounts with Drawbaugh. The account of the first year was more than half paid for in work; the balance was carried to the next year's account; in the account, April, 1874, is an item of $5 cash loaned; the credits are largely for work. April 1, 1874, the account was balanced by Mr. Leonard's taking a note for $25.

Mr. Leonard still continued to give him credit till the account had run to the end of 1875, when, Dec. 9, 1875, Drawbaugh paid $10, Dec. 20, $14, and Dec. 31, apparently gave a note or due bill for about $15, the balance. Besides all this there were considerable cash sales to Drawbaugh, and at one time, September, 1874, a loan of $10 cash to him; Mr. Cyrus Bowman, Leonard's miller, testified that he never hesitated to give credit to Drawbaugh (Bowman, complts, i, 668, ans. 25). In Drawbaugh's deposition (defts, ii, 887), in trying to account for the way in which he expended his $10,000 without using any to take out a patent on his "successful and practically operative" talking machine, he put in evidence a note signed by George W. Kissinger and himself for $60, at thirty days, to George Leonard. He undertook to swear, not positively but as positively as he did about other things, that he paid it in July, 1873, and he thinks out of his share of the money received from the Haucks. He could not tell how he came to give that note. It turns out upon the deposition of George W. Kissinger (complts, i, 557, 558, ans. 53–58) that the real transaction was that Kissinger, who kept the village store, and was a man then absolutely without means, took Drawbaugh's note for his store bill, *and Mr. Leonard did not hesitate to cash it.* Kissinger testifies (complts, i, 557): —

"*Q.* 53. Mr. Drawbaugh, in his testimony (defendants' printed record, p. 887) produced a note signed by himself and you, dated April 26, 1873, for $60, payable thirty days after date in favor of George Leonard: do you remember about that note?

"*Ans.* Yes, sir.

"*Q.* 54. Mr. Drawbaugh testified that it may have been for a bill he owed you at the store: was it for the bill, or part of the bill, he then owed you?

"*Ans.* Yes, sir; it was got out of the store.

"*Q.* 55. Did Mr. George Leonard cash that note for you?

"*Ans.* I think, if my memory serves me right, I got nearly all cash for it.

"*Q.* 56. What did you get for the rest of it that you didn't get actual cash for?

"*Ans.* It went on part rent and bills of things that I got from Mr. Leonard.

"*Q.* 57. I see that note is signed both by you and Drawbaugh: was it understood between you which of you two was to pay it?

"*Ans.* Yes, sir; Drawbaugh was to pay it.
"*Q.* 58. Have you ever been asked to pay it?
"[*Objected to by Mr. Hill as immaterial.*]
"*Ans.* No, sir."

Mr. Leonard testifies (complts, ii, 1201):—

"*Q.* 3. In the deposition of Mr. Drawbaugh (p. 887, defendants' printed record) there appears a note dated April 26, 1873, signed by George W. Kissinger and Daniel Drawbaugh, payable to you for $60, thirty days after date: will tell me how you came to take that note and whom you took it from?

"*Ans.* I took it from Mr. Kissinger; I understood that Mr. Drawbaugh — Mr. Kissinger told me that Mr. Drawbaugh owed him a store bill, and he said Mr. Drawbaugh would go his security for the money. If I advanced it Mr. Drawbaugh would pay me. I consented to do so, as they said it would be a little accommodation to both parties. I advanced the money to Mr. Kissinger; he wanted to use the money and Mr. Drawbaugh couldn't just make it to him at present, at that time."

That the transaction was this: Drawbaugh owed Kissinger, the grocer, a bill for groceries; Mr. Kissinger had occasion for money; Drawbaugh made a note to Kissinger for $60, April 26, 1873, which Kissinger signed and turned over to Mr. Leonard. It appears elsewhere that Kissinger was entirely without means at the time, and Mr. Leonard *cashed the note on the faith of Drawbaugh's name;* Kissinger was not expected to pay it, was never asked to pay it, and did not pay it, — it was Drawbaugh's own debt. So that here this man, who is represented as too poor to raise $15 for a caveat, and about whom a general expression of poverty was sought from Mr. Leonard, had such credit that his note for $60 was discounted by Leonard without any hesitation. A small portion of the money was paid by Mr. Kissinger at once to Mr. Leonard for rent which Kissinger owed Leonard, but the principal part of it was advanced in actual cash.

Drawbaugh in his deposition (p. 894), put in evidence another note to George Leonard, Dec. 31, 1875, signed by himself alone, for $103, with various payments indorsed upon it, and these payments are sworn to by Drawbaugh as accounting for the disposition of his other money. It turns out from the deposition of Leonard that the $60 note was given under the circumstances stated, that when it became due and before the end of 1875 that note had not only been

allowed by Leonard to stand over, but more money had been advanced to Drawbaugh until the debt amounted to $103, for which Mr. Leonard took Drawbaugh's unsecured note, and appears to have had no hesitation in doing so.

"*Q.* 4. There has been put in evidence in Mr. Drawbaugh s deposition (defendants' record, p. 894) a note dated Dec. 31, 1875, according to which Mr. Drawbaugh promised to pay you $103, one day after date, and the note ran several years before it was paid in full: do you remember taking that note?

"*Ans.* Yes, sir.

"*Q.* 5. Was the Kissinger-Drawbaugh note of $60 paid the same season it was given; and was there any connection between the $103 note and the $60 note, and if so what?

"*Ans.* He had run another mill account and we put the two together. I suppose I gave him up the old note when I took the new one; that was generally the way I done, — always kept it on one note.

"*Q.* 6. Then the old note, signed by Drawbaugh and Kissinger, was settled by taking for it the new note of Drawbaugh alone, which included the $60 and some other things: is that the fact?

"*Ans.* Yes, sir, to the best of my knowledge. We had some other dealings, I suppose, besides the mill account; it was satisfactory to us both when I took the note."

Mr. Leonard, the lender, says of it (ans. 6, complts, i, 701), "it was satisfactory to us both when I took the note." And, in addition to the amount of this note, Mr. Leonard says: —

"*Ans.* 7. I might have lent him a little now and then, when he was feeling a little pinched, but he would always pay it back without giving any note."

Here is another of those interesting cases where a general expression can be got from a neighbor that Drawbaugh was poor, but when we come down to the actual facts, we find that that very neighbor had not the slightest hesitation in taking Drawbaugh's note for $60, and afterwards letting him have more money and supplies, and then taking his note for the whole, $103. When we come to look at Drawbaugh's account of finances, we find here, at least, $50 to spare; he undertakes to put in both of these notes as two separate debts as he paid out money for, whereas it turns out they were only one debt. It is perfect folly, under such circumstances, for Drawbaugh to say that he could not have raised $50 for a patent, or $15 for a caveat, in all these years, or that he could not have raised it from Leonard

on the additional credit of such a wonderful invention; for he had not the least difficulty in getting a larger amount of money from Mr. Leonard.

What does the Court think of Drawbaugh as a truth-telling and reliable witness after this and other similar performances?

When called for the complainants, Mr. Leonard testified, as a great many other witnesses did, that Drawbaugh's family appeared to be as well dressed and as well taken care of as anybody in Milltown; that his furniture was as good as Mr. Leonard's. Mr. Leonard helped move him in the spring of 1876 and again in 1877.

Among the other items in Mr. Leonard's ledger is the account of E. R. Holsinger, from which it appears that Mr. Leonard had no hesitation in taking from Mr. Holsinger as cash an order on Drawbaugh for $10. The fact is that Drawbaugh owned productive real estate, and, though slow pay, he was in fact and readily given credit by those who knew him.

No. 116. *William F. Lenig*, p. 728.—Says that while Hubler was teaching school at Eberly's Mills, Hubler got him to go along to Drawbaugh's shop and see a great invention, called the "talking machine," and they went to look at it. He says that Drawbaugh then said that he had talked through it, but could not then, because one of his wires was unhooked, or something; he said then it was about ready or soon ready to get patented, but he hadn't the money. Saw C and A; it was either January or February, 1874. There is not a pretence that A existed at that time. (See Hubler, p. 235, *supra*.)

No. 117. *Samuel F. Hertzler*, p. 46. — Has lived in Milltown an indefinite number of years, and known Drawbaugh since 1866. This witness was a member of the Drawbaugh Manufacturing Company from the beginning. He is one of the most prominent men in the neighborhood, owns two farms, is worth $40,000; is a wine maker, in addition to the ordinary business of farming. His place is a place of very considerable resort, on account of the refreshments to be obtained there, though he does not keep a bar. His house is not absolutely in the village of Eberly's Mills, but is separated by only one field from it; that field appears to belong to him; so that

his farm touches the village. It is impossible to suppose that Drawbaugh could have had a practical talking machine during and from the time of the Faucet Company without Mr. Hertzler having known of it, or to suppose that his talking machine could at any time have been the subject of general knowledge in the neighborhood without Mr. Hertzler knowing of it both in the village and from the frequenters of his own place.

He and Drawbaugh appear to have been very good friends; and yet the fact is that Mr. Hertzler knows nothing whatever about Mr. Drawbaugh's alleged telephone. They called him on the question of Drawbaugh's alleged poverty, and *they did not refer to the talking machine either in question or answer through the whole of his deposition.* For a further consideration of this matter of the Faucet Company, see the body of this brief, *supra.*

This deposition is remarkable in another respect: it appeared afterwards, in the deposition of Henry S. Rupp (complts, ii, 1141), that when the defendants were taking proofs in chief, three of the more prominent members of the Faucet Company — Mr. Hertzler, Mr. H. S. Rupp and Mr. W. R. Gorgas — assembled at the house of Mr. Gorgas in Harrisburg at the request and in the presence of the defendants' two counsel, and there they discussed Mr. Drawbaugh's finances while connected with the Faucet Company and his money relations with the Faucet Company. The opinion was arrived at by at least one of those present, that it was nonsense to talk about Drawbaugh's poverty at that time. The facts developed at that conversation are easily understood from the actual result of it, which was that the defendants did not call Mr. Gorgas to ask him anything about either poverty or telephones, taking from him only a short deposition in surrebuttal (p. 1128) much more conclusive against them than even his silence would have been. They did not call Mr. Rupp to ask him about either poverty or telephones, but the complainants did; and they did not call Mr. Hertzler to ask him about telephones at all, nor about poverty during the period of the Faucet Company.

The whole of Mr. Hertzler's testimony is that Mr. Drawbaugh bought provisions from him, but in quite small quantities; sometimes he would pay cash, when he had it, and sometimes he would get them

on credit, which was never refused. At the time Drawbaugh's father died, Drawbaugh came to Hertzler's in the evening and asked Hertzler to lend him money enough to pay his railroad fare to go to where his father had lived to attend the funeral. Mr. Hertzler not only gave him that, but proposed that he should take his wife with him, and gave him $5, which was enough for both of them. Mr. Drawbaugh said his children could not go, because they had not suitable clothes, Hertzler thinks. He probably meant that he did not intend to get mourning for them. He took the $5 to pay the fares of himself and wife, but went alone (Drawbaugh's cross-examination, defts, ii, 1057). Mr. Hertzler says that he did not repay it in cash, and doubts if he ever paid it in full, but did various pieces of work for him. He does not remember the date of this.

No. 118. *W. H. H. Knight*, p. 72. — This witness is a draughtsman, from the office of Mr. Hill, the defendants' counsel. He made drawings of the Drawbaugh instruments, and was called to put the drawings in evidence and give some description of the instruments. It is evident both from the slovenly inaccuracy of the electrical parts of his drawings and from his deposition itself that he knows nothing of electrical apparatus.

He professes to have practical mechanical knowledge, and his cross-examination contains the following (defts, ii, 776): —

"*X Q.* 168. Do the instruments A, D, E, G, H, J, K, L, M, N, O, P, Q, exhibit skilful mechanical workmanship?

"*Ans.* I should say a first-class mechanic had made them.

"*X Q.* 169. What should you say about B; does that exhibit first-class mechanical workmanship?

"*Ans.* The instrument appears to me to have been made as an experiment; I consider myself a mechanic and have myself made far cruder experimental machines in order to test certain movements or results.

"*X Q.* 170. Should you make the same answer about C?

"*Ans.* So far as the base, supports and uprights were concerned I should.

"*X Q.* 171. Should you make a similar answer about the broken glass tumbler instrument F?"

Then he suddenly remembered the interests of his employers and said: —

"*Ans.* That instrument appears to have been made with care and by a person who thoroughly understood his business."

No. 119. *Daniel Drawbaugh*, p. 780. — The claimant's direct examination occupied thirteen working days and covered one hundred and fifty-four pages; the cross examination occupied thirteen days and covered one hundred and eighty pages; the redirect occupied nearly two days and covered twenty-eight pages; the recross about three pages, and the following redirect about one.

His deposition will be considered separately (p. 281, *infra*). It is necessary here to notice only certain features in it to account for the new departure the defendants took in their subsequent testimony.

Up to the time of this deposition there had been plenty of witnesses who swore to hearing perfectly good talk through B and F during the whole period from 1867 to 1874 or 1875, and even later. In Drawbaugh's deposition it was alleged that C and I were made about 1870 or 1871, and that they were much better instruments than B and F; that even if used with F, I was a much better receiver than B. Moreover, C and I were magneto instruments, requiring no difficult adjustment at all, and no battery, being always in condition to use; whereas F, so far as can be judged from the much improved form called "F reproduced," was an instrument which always had to have a battery to be arranged for it, and needed the most assiduous, careful, delicate and difficult adjustment from minute to minute. The story of the previous witnesses was that during the four or five years while C and I are alleged by Drawbaugh to have existed as perfectly operative instruments, it was F and B only which he was habitually showing to people who came there as mere casual visitors, and whose alleged listening at the alleged machine was not pretended to be anything more than the result of curiosity. Drawbaugh testified very explicitly to the advanages of C and I over F and B, and that either C or I was fit to be used as a receiver.

Now no witness examined before Drawbaugh had known of the use of C and I together, and only two witnesses, members of Drawbaugh's family, pretended to any use of either in connection with other instruments. The difficulty of making the Court believe that he had the more advanced instruments during the time when his witnesses were swearing to the constant use of B as a receiver and of F

as a transmitter seems to have occurred to the defendants; at the end of Drawbaugh's deposition, and although up to that time they had not produced a single witness who testified to speech through C and I, they immediately, after Drawbaugh's deposition was closed, proceeded to have their witnesses swear to these two instruments.

No. 120, *C. E. Updegraff*, p. 119.
No. 121, *J. H. Smith*, p. 1133.
No. 122, *T. Updegrove*, p. 1137.
These three witnesses are to be considered together.

No. 120. *C. E. Updegraff*, p. 1119. — This person was apparently at one time an eye doctor, presently afterwards made lanterns, then became a dealer in hats, and at the time of his deposition dealt in sea shells. He says that he formed Drawbaugh's acquaintance in May, 1874; he was living at Harrisburg, and went to Dillstown to operate on a case of cataract; on his way back, taking his gun with him, he drove by Eberly's Mills, went to the shop to get information as to the prospects of game, and saw some machinery, and, as he was always interested in machinery, Drawbaugh showed him some things, and said he was getting up a talking machine. Mr. Thomas Updegrove was with him. Upon being asked on direct examination how he has refreshed his memory as to the date of that visit, he says he has from his book account and from the livery-stable keeper's book where he got the horse, adding, "I didn't see the book, but Mr. Cummings, the livery-stable keeper, told me; I asked him whether he had made an entry of it, and he said he would look, and afterwards told me that an entry had been made of it." He said that again, on the 20th of April, 1875, which day he says he gets from an account about a patient in his book, he and one Boyle went fishing on the Yellowbreeches Creek. They had a portable boat and went to "Zacharias's mill," "I judge about three or four, or maybe five, miles above Drawbaugh's shop," camped there and floated down the stream to Eberly's Mills, fishing and gunning. Drawbaugh invited them to go into the shop and sleep there. "We talked pretty nearly all night on the general subject of talking machines, electrical inventions and one thing and another. He said all he wanted was somebody to put

money into it to get it patented." The witness says that he rather doubted the machine; and thus to prove what he said Drawbaugh fetched the machine and they talked through it. The witness adds as to Zacharias's mill (p. 1121): —

"I only know that Zacharias was the man who run the mill, or attended it. I do not know whether it was his mill or not, but I think he was the miller there."

He says that afterwards, about the middle of May of the same year (1875), he, J. H. Smith, Updegrove and Boyle went again on a fishing excursion, camped on the island near Drawbaugh's shop, and in the morning Smith and the witness went into the village to buy provisions. On the way down they stopped at the shop to see Drawbaugh, and saw the talking machine again. He thinks he has not been at Drawbaugh's shop since. Thinks that he can identify C and B and I; thinks that he also saw A, but cannot say whether it was on the first visit or the second. At the second visit he says that he saw D and F and B also; not quite sure which he listened at and talked through. He says that Drawbaugh seemed to have his talking machine very much at heart; that Drawbaugh spoke of its use from his house to his shop, from house to house, or through a large factory; that Drawbaugh said he had been working several years on it. "I do not know that he mentioned the time, but I inferred that he had been working on it six or seven years." The witness says that some time before testifying he picked up a newspaper, or rather Boyle called his attention to an article in a newspaper referring to this suit, and after talking with several people, they advised him to write to the attorneys, and he did so. That Mr. Jacobs then visited him; that Mr. Jacobs asked him to bring his books to verify the dates, but he forgot to bring them.

The story of this last visit is sought to be confirmed, and on the face of their depositions appears to be confirmed by Updegrove and J. H. Smith. They agree fairly well in the account of what they saw of the instrument. It was not used at this visit.

P. 1133, Smith says, "in the morning we went up to a farm-house to get some milk for our coffee; and from there to a grocery store to get some other things we needed; . . . after we had provided what was necessary we went down and got our breakfast."

The first thing that struck us as peculiar in Updegraff's deposition was his statement that, although he did not bring his books with him, he had looked at them half a dozen times, and that Mr. Jacobs had been down to see him three times at least, or four times, and had looked the books over a number of times. It certainly appeared peculiar that of the means this witness said he had to fix the dates, the one should be books which required half a dozen examinations, and which were not produced, and the other should be the books of the livery-stable keeper, which he did not see, and did not see the livery-stable keeper look at, but merely heard of from the livery-stable keeper. Undoubtedly the evidence is technically competent if the witness swears to the date without the actual production of those books; but, to say the least, it has extremely little value to it.

But there is another circumstance in this deposition which makes his dates perfectly certain, not, however, at the time the defendants want them. He says, as part of his description, and on direct examination, that he stopped at "Zacharias's mill," or at the mill where Zacharias was then miller and not owner, and that this was up-stream above Drawbaugh's shop three, four, or may be five, miles, and that they floated down from the mill to the shop. Now the first mill up the stream above Drawbaugh's, and the only one to which there is boatable water, was Hake's mill, and the only Zacharias who was miller on the creek was the defendants' witness, J. J. Zacharias, who was at Cumberland Mill, four miles *below* Drawbaugh's, until April, 1876, and went to Hake's mill in April, 1876. This appears from the deposition of Zacharias himself (defts, i, 49), and in other ways from the deposition of S. N. Emminger (complts, ii, 929). For all this see the abstract of deposition of Zacharias, p. 24, *supra*.

From this witness's statement that on this expedition they stopped at the mill up-stream from Drawbaugh's, and where Zacharias was then miller, it is absolutely certain that this expedition was not made until after the first of April, 1876. It is not merely that this turns the date over to a period subsequent to Mr. Bell's patent, but of course leaves nothing to the credit of this witness; and it shakes one's faith in this class of proof.

This is not all. The witness described the second excursion to be about a month later, but in the same year. Of this he says (p. 1122), "In the morning Mr. Smith and myself went up in the town to lay

in a stock of provisions"; and Mr. Smith, in describing the same thing, says (p. 1133), "We went up to a farmhouse, to get some milk for our coffee, and from there to a grocery store, to get some other things we needed." Now in the year 1875 there was no grocery store at Eberly's Mills. On Jan. 19, 1875, the grocery store, then kept by Abner Wilson, was blown up. It was not at once rebuilt, and the village was for nearly a year without one; it was rebuilt in the fall of 1875, and reopened in the winter 1875–76, by Jeremiah Fry. This appears positively and affirmatively from the statement of the defendants' witnesses Holsinger (defts, i, 390; Fettrow, p. 667; Jeremiah Fry, p. 153), and the newspaper account of the explosion (complts, iv, exhibits, p. 401); from the statement of the date of the explosion by the defendants' counsel in examining one of his own witnesses (defendants, surbtl, 816, int. 6). This matter is fully stated on p. 108, *supra*. In May, 1876, there was a store there kept by Fry.

Here then we have in the miller Zacharias and the circumstance of the store the proof that this whole story of these witnesses is the result of some delusion, and that their visit did not take place until after the date of Mr. Bell's patent. So far the attempts to harmonize the story by reinstating C and I have not been successful.

No. 123. *Washington Sutton*, p. 1147. — Age, sixty-one; Lewisburg; blacksmith; says that he went to Drawbaugh's shop in August, 1873, to buy a lathe. He asserts this date by an arbitrary connection in his mind that it was about the time he had a sale; he fixes the date of the sale by a note given which he produced. He says that Drawbaugh showed him a talking machine and talked through it, but he cannot tell whether or not he understood what was said through it; he thinks he did, but would not like to say; he was of the impression that the machine was a very excellent invention; thinks they talked through one floor to another. Drawbaugh said he was not able to get it patented, because he hadn't money enough. Thinks he saw C, or at any rate he recollects particularly a permanent magnet like that reproduced on C, and a piece of brass on the top of the electro magnet, or something like it, to fasten it down; may have seen others, but cannot recollect anything but that one, or

something that looked like the electro magnet on B; cannot tell exactly what machine he looked at. When he first saw telephones in Baltimore, he says that he said that if it was patented Drawbaugh ought to have a patent for it, because he had seen one there in 1873; but nobody is called to substantiate this statement.

No. 124. *R. B. Sutton*, p. 1147. — Nephew of the preceding witness; lent a horse and buggy to his uncle, August, 1873, he thinks. He says that when the horse and buggy came back his uncle told him that he had seen things at Drawbaugh's shop, and on being asked whether he mentioned anything about a talking machine, the witness assents, saying that he did.

"*Q.* 9. What did he say about it?

"*Ans.* He said that Drawbaugh had invented a machine that was a curiosity, something that he had never before seen; he said he had a machine invented or partly invented, that he could talk by electricity by attaching the wire to the electricity; that he could understand what he said, or he could talk so that they could understand him; he could talk so that his family could understand him at the house while he was at the shop himself, and he said that he had heard speech through."

The rest of the talk about what he had seen at Drawbaugh's shop was: —

"*Ans.* 15. He had talked concerning a large clock that he had invented that run, if I mistake not, by electricity.

"*X Q.* 16. What did he tell you about the clock?

"*Ans.* I don't remember a great deal more than he claimed that it was very fine work."

There was nothing in Drawbaugh's shop in 1873 that could by any stretch of imagination be described as a large clock run by electricity and "very fine." The electric clock at *that* time was a rude skeleton, without case or face. In 1877 there was such a clock.

No. 125. *W. H. Decker*, p. 1149. — Age, forty-one; Wilmington, Del.; iron worker. Has known Drawbaugh since 1873. Says that he lived at West Fairview and worked for Col. McCormick at the Nail Works from February, 1872, to December, 1877. Went to Drawbaugh's shop four times; the first time he says was in August, 1873, and he fixes it merely by his own statement, that it was the

time when he went to Lancaster to work in another mill and came back again. Says he was attracted to Drawbaugh by hearing of his nail-feeding machine. His statement of this date is pretty loose; he says he started the double turn at the mill in 1872, and that in May, 1873, — the next year, — "the double turn didn't run so very well *for the first start off*"; that he went to Drawbaugh's shop at that time to see the nail machine, and while upstairs saw on the bench an oyster can on a piece of board and a glass tumbler filled with something white (ans. 11, p. 1151).

"Looking around some little time, I put my hand on this tin can; I says, 'What do you call this?' 'Oh,' he says, 'we are going to talk through that some of these days.'"

The complainants consider that proof that on the 7th of August, 1873, what Drawbaugh showed was B and F, saying, "We are *going* to talk through them some of these days," is proof fatal to the story the defendants have told and must prove.

He says that he next was there (second visit, p. 1151) "in the commencement of the fall of 1874," and that he went there to see Mr. Kline, the inventor of the axle; found Mr. Kline there; then saw Drawbaugh and picked up the machine; Drawbaugh told him "that is some more of my talking machine." Drawbaugh went to the other end of the building and said to him (ans. 17, p. 1153): —

"'Put it to your ear.' I put it to my ear and the sound came. 'What is your name?' he says; 'W. H. Decker,' I says; another sound came, 'Where from?' 'West Fairview,' I says; another sound came, says he, 'Do you know Jake May?' I says, 'Yes, sir.'"

He says that the instrument he then used was D, but he did not talk back through it, talked back through the air (ans. 19, p. 1153). There is not a pretence that D was made at that time.

His next (third) visit he says was in the latter part of August, 1875 (ans. 23, p. 1154). At this visit the instruments that he saw he described as follows (p. 1158, ans. 56): —

"These I seen sitting on the counter (indicating C and C reproduced)."

Drawbaugh does not pretend to have ever had *two* such instruments. Speaking of this third visit, Decker testifies (p. 1155): —

"*Q.* 26. At that visit, in 1875, did you see any talking machines there at the shop?

"*Ans.* Yes, sir; plenty of them, on the bench and on the walls,—at least what they called talking machines?

"*Q.* 27. By 'on the walls,' what do you mean? explain yourself.

"*Ans.* Some were fastened up against the walls, and some were on the benches. The bench was up to my stomach, as near as I can judge. I leaned against the bench.

"*Q.* 28. Did you at that visit talk through the talking machines or not?

"*Ans.* No, sir; I did not talk, but Mr. Drawbaugh talked to Mr. Kline through the talking machine, and I stood right alongside of Mr. Kline, right against the bench.

"*Q.* 29. Did anybody talk to you through the talking machine at that visit?

"*Ans.* Yes, sir.

"*Q.* 30. Who talked to you through it?

"*Ans.* Daniel Drawbaugh.

"*Q.* 31. Could you hear and understand, through the machine, what he said?

"*Ans.* Yes, sir.

"*Q.* 32. Have you any recollection of what was said through the machine to you at that time?

"*Ans.* Yes, sir.

"*Q* 33. State what you remember of it.

"*Ans.* 'How is my old friend, Jacob May, and his family?' he says. I said, 'They were all well, when I last saw them.' He says, 'I understand there is an increase in the family.' I told him I wasn't positive of that, and couldn't give him no positive answer. He says, 'Well, they are all well, so far as you know?' I said, 'Yes, sir.' He said, 'I am much obliged.'"

"*Q.* 37. Did you hear what he said through the instrument or through the air?

"*Ans.* Through the instrument.

"*Q.* 38. Did you answer back to him through the instrument or through the air?

"*Ans.* I said to Mr. Kline, 'Can I talk through this?' That is when Mr. Kline handed me the instrument. Daniel says, 'Take this instrument.' 'Oh!' said Mr. Kline, 'yes, you can talk anything you want to talk. I answered back through the instrument."

This story is proved to be false. In the first place, there is not a pretence that Kline ever saw or knew of a talking machine. The other members of the Axle Company had hardly any more than a suspicion that they might have seen something. It is of course impossible that this witness could have seen "plenty of them around on

the benches and on the walls" when those engaged in the shop have hardly a recollection, if at all, that they ever saw any. (See the deposition of Moore more particularly, p. 205, *supra*, and also Grove, p. 226, *supra*, and Bear, p. 198, *supra;* for proof that Kline never saw anything, see body of brief under head of Axle Company, and also p. 205, *supra*.)

But the neatest proof comes from the thirty-third answer. According to the witness's story, the talk through the telephone was about "my old friend, Jake May." Concerning him, Drawbaugh said to him through the telephone, "I understand there is an increase in the family." Now that was an event the date of which could be fixed. So we called Jacob May, and he testified (No. 97, complts, ii, 1563) that he had a child born in May, 1872, and another on Aug. 12, 1876, and none, nor any indications of one between the two dates.

As to the identification of any instrument, his story that the shop was full of instruments fastened up against the walls and on the bench is enough to destroy his value as a witness.

His fourth visit, he says, was in 1877 (ans. 39). At that visit he says (ans. 57) that he saw H, but at that time there was no talk through the instrument. He says that he cannot fix exactly when it was in 1877 that he was there, but it was in warm weather, and just about a couple of weeks after he had gone to Harrisburg to see the Hazleton clock. Again, on this occasion of 1877, the shop must have been lined with talking machines (p. 1159): —

"*Q.* 65. At all the visits, when you were there, were the instruments lying open, exposed to the view of any person who might come into the shop?

"*Ans.* Yes, sir; anybody could see them.

"*Q.* 66. How many talking machines or instruments do you think you saw there at the time of your second visit? I mean the visit of 1874.

"*Ans.* They were numerous there; I couldn't exactly give the number; some were finished and some were half finished; they were setting around there on benches and on shelves. I suppose if they were all talking machines there were a good many.

"*Q.* 67. Do you know whether they were all talking machines that you have referred to as sitting around on shelves?

"*Ans.* No, sir; I don't know whether they were all talking machines.

"*Q.* 68. My question referred only to talking machines. I asked

how many talking machines you thought you saw around there at the time of your second visit.

"*Ans.* I think there were six or seven anyhow, to the best of my knowledge.

"*Q.* 69. Do you think you saw as many as that at the time of your third visit?

"*Ans.* Oh, yes, sir.

"*Q.* 70. Do you think you saw more at the time of your third visit than you did at the time of your second visit?

"*Ans.* Yes, sir; every time I went there there was more than there was before."

He asserts the date to be in warm weather, about two years after he saw the Hazleton clock on exhibition in Harrisburg; describes the Hazleton clock, what is was, and the advertisements, and precisely where it was exhibited. Our witness, Joseph L. Weaver, produced copies of the Harrisburg newspaper advertisements of the clock (compl'ts, ii, 1224, and complainants' exhibits, iv, p. 380). It appears from these advertisements and the newspaper accounts that the exhibition of the Hazleton clock was from Christmas, 1877, to Jan. 5, 1878. This alleged visit, if it was two weeks after he saw that, was not in the summer of 1877, nor was it in warm weather. His memory is all confused.

Jacob May testified (complts, ii, 1563, 1564) that he had known Drawbaugh for twenty years. The first time he went to his present shop he went with Mr. David Stevenson to try and borrow some money from Mr. Leonard, who appears to have been a capitalist and a lender of money. The next time he went was with Mr. Decker, to see a Sheppard lathe; and that was during the campaign for the election of governor, and they had a pretty strong talk with the miller about greenbackism; this was the election of the fall of 1878. (The lathe was one bought by the Clock Company in April or May, 1878.) He went over at another time, after seeing that Sheppard lathe, with a Mr. Pike, to examine the lathe, with a view of buying one like it, and then for the first time he saw a telephone instrument. A is the only one he could identify. This visit with Pike, like that with Decker, was in the fall of 1878. He has an impression that he saw F there, but is not certain about it. Drawbaugh (Q. 24, complts, ii, 1150, 1165) has been to him since the suit began, showed him some instruments, and asked for his recollec-

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tion, but he did not call him as a witness. The cross-examination did not disturb his deposition in the least.

Mr. Pike (complts, ii, 1561) remembered the visit with May to see the Sheppard lathe, and swears that it was in the fall of 1878.

Decker, in his deposition, had stated that he was very confident he was not at Drawbaugh's shop after 1877, because he says he quit Col. McCormick's employ in the month of September, 1877, and went out to Kansas with a colony in the April following. Literally it was true that he went then; but for all the purposes of the case it was false, because, although he did go to the West, he came back in a month or two, and a record of the "Sovereigns of Industry" shows that Decker was present at the meeting of Aug. 24, 1878, and was there appointed on a committee to attend to some considerable business.

J. P. Wilbar bookeeper of Col. McCormick's nail works, produced the book with Decker's account in it (complts, ii, 1559); and this shows that instead of quitting in September, 1877, as he swore, he worked until the 30th of March, 1878. All his dates, therefore, are very unreliable. The defendants' counsel, in cross-examining Wilbur, tried to bolster up Decker's character a little, and the following occurred (complts, ii, 1561): —

"*X Q.* 12. Do you regard him as a reliable, truthful man?

"*Ans.* I never had a personal reason to think him otherwise, only that he was inclined to talk very freely on matters that we thought were very highly colored."

L. R. Spong (complts, ii, 1558), railroad agent at Fairview, proves that Decker's family did not move away from Fairview until Oct. 20, 1879, and had lived there continuously before that for a great many years.

So that all the alleged facts by which he undertakes to fix the dates of his visits to Drawbaugh's shop are misstated by him materially. He fixes his last date, 1877, when he says he saw H, by the statement that he left Col. McCormick's employ in September, 1877, and went out to Kansas in the April following. It turns out to be that he never left McCormick's employ until the spring of 1878, when he went out to Kansas for, perhaps, a couple of months without his family, and that his family remained

at Fairview until 1879, and presumably he either lived there, or was back and forward a good deal.

No. 126. *Thomas Draper*, p. 1165.—Age, sixty-six; Dover, Delaware. The complainants heard accidentally that Thomas Draper, of Dover, Delaware, had recently said that he knew something about the alleged talking machine, and Mr. Tompkins, a gentleman in the complainants' employ, went to Dover to see him. Mr. Draper said that he did know of them; that he went over to Drawbaugh's shop once with a tenant of his, Kissinger, to order a hydraulic ram for the farm which he owned and Kissinger occupied, and then saw a talking machine; and that that was in 1873. On which, naturally, the agent of the Bell Company said that if that were the case they probably would not call him as a witness.

But Draper referred Mr. Tompkins to Kissinger, and Kissinger, visited within twenty-four hours, said that the visit to Drawbaugh's shop was in 1877, and that the ram was put in in 1878; that he was the storekeeper at Eberly's Mills from April, 1871, until April, 1874; that Drawbaugh and his counsel had visited him, but that he never heard of Drawbaugh having a telephone there while he lived there, nor for a long time afterwards. Drawbaugh did not call him. So we were easy.

But Draper wanted to make himself of importance; so he at once wrote a letter to Drawbaugh stating that he thought he could be of service to him as a witness, and offering to testify; the letter is printed, defendants' exhibits, p. 111.

A week or ten days after that Mr. Drawbaugh and his counsel went to Draper's place and saw him. In the mean time he had found the lease from himself to his tenant, which was dated April, 1874, so he had to push his date over one year at least.

Then they called Draper, but having also visited Kissinger they did not call him. Draper's story is this (defts, ii, 1165): —

"*Q.* 6. How long after that lease was made do you think it was before you made the acquaintance of Mr. Drawbaugh in the manner you have stated?

"*Ans.* I couldn't say positively, but I think it must have been in the early part of the summer, or it may have been in May, possibly; I couldn't state positively; I know it was shortly after Mr. Kis-

singer moved on the place; he complained that his wife had to carry water too far, and he wanted me to put in a ram.

"(A copy of said lease, certified by the examiner, is put in evidence, and hereto appended, and is marked 'Exhibit Draper-Kissinger Lease.')

"*Q.* 7. Are you confident that it was in the same spring or summer?

"*Ans.* Yes, sir; I am sure of that.

"*Q.* 8. Did you arrange with Mr. Drawbaugh to furnish a ram for your farm?

"*Ans.* Yes, sir.

"*Q.* 9. Do you know when that ram was put on to the farm?

"*Ans.* I do not, but I don't think it was put on until 1875; the arrangement was made that Kissinger was to cut down sapling and bore out the piping until he had enough to reach from the spring to the house; he had a trouble in getting an auger to bore the piping, but at last succeeded in getting one, and made the piping; then the ram was put in by Drawbaugh; but I was not present when it was put in, and do not know exactly when it was done.

"*Q.* 10. When you made Mr. Drawbaugh's acquaintance did you visit his shop with Mr. Kissinger?

"*Ans.* I did.

"*Q.* 11. Were you ever there at any other time before or since that visit?

"*Ans.* No, sir."

"X *Q.* 49. I understand you to say that the visit to Drawbaugh's shop you have testified about was for the purpose of ordering a ram, but that it was the following season when the ram was actually delivered and put up: is that your meaning?

"*Ans.* So far as my visit to Drawbaugh's shop is concerned, that is correct; but I am not certain that I said positively that the ram was not put in until the next season. I am not certain about that, but I am of the opinion that it was not put in until the next season. I know that there was considerable delay about getting the wooden piping bored, and I wrote to him several times about it, but Kissinger didn't get it in until some time in the following season. I was anxious to see how the ram would work. Kissinger's excuse to me was, that he couldn't get an auger to bore the pipes with; I think it was some time late in the season; I think it was in the fall of 1875 some time, when he put the ram in; that is my impression."

The time of ordering, he thinks, was in the first year of his lease; but he also says, — *and this was drawn out on direct examination in reply to a specific question when the ram was put in*, — that it was put in a year after, and that it was put in in the fall of 1875. The witness had some doubt apparently whether it was not put in earlier

than that, but he thinks that "it was not put in until the next season." He thus excludes any delay longer than one season. He says that Mr. Kissinger asked Mr. Drawbaugh how he was getting along with his talking machine, and that Drawbaugh replied that he had it nearly completed or was getting along pretty well; he said that what he lacked was money to put it through and to patent it, and, according to the witness, Kissinger said, "You had better get Draper enlisted in it: he has plenty of money." Drawbaugh invited them in and said he would like to have the witness take an interest in it (p. 1166): —

"*Ans.* 14. . . . he took the pains to show me his instruments, and gave me to understand that he wanted me to go in with him. I declined; I told him that I was too far away, as I was in business in Delaware, and I did not care to invest in it, although I thought it was a good thing and might turn out well.

"*Q.* 15. Do you remember whether he said anything about what he thought the value of it; and, if so, what he said?

"*Ans.* He said he thought it was, or would be, one of the greatest inventions of the age, and would take the place of telegraphing. I think those were as near his words as I can recollect, — about the expression.

"*Q.* 16. Did he state whether he had used the talking machine outside of his shop or not?

"[*Objected to as secondary and hearsay, and otherwise unimportant.*]

"*Ans.* I think he said he had not used it out; he said he was convinced he could.

"*Q.* 17. Do you remember whether he gave any reason for not having used it outside of his shop, and if so, what that reason was?

"[*Same objection.*]

"*Ans.* I don't recollect his words on that occasion; he intimated that he was keeping it kind of secret, but I don't recollect his words; I know what he said he could do, but I don't know what his reasons were for it, only as I gather it from his talk.

"*Q.* 18. What did you gather from his talk that his reasons were for keeping it kind of secret?

"[*Same objection.*]

"*Ans.* I thought from what he said that he didn't want everybody to know; he said he thought that by the same current of air he could talk across the street. I don't think he told me what his reasons for keeping secret were. The idea that I gathered was that he intended to get a patent on it and was keeping it secret for that purpose. I don't know that he said so to me, but that was the idea I got of it."

The witness then said that they talked through the machine from one room to another, and that the machine he listened at was something like I and that the one he saw was like C or "C reproduced." Thinks he also saw a glass tumbler lined with something white.

He says that he first knew of telephones in commercial use, or first talked through a telephone in 1880 or 1881; and he says that he thought that that must be one of Drawbaugh's telephones.

That is an important witness, because he is one of the very few who seemed to have been solicited to put money in. It is very certain that at the time of that visit (whatever be its true date) C and I were the best instruments Drawbaugh had, because he would use his very best with a person whom he wanted to put some money in. The date of this visit therefore becomes an important matter for the party who wishes the Court to believe this witness.

It is evident from the deposition of the witness on its face that his recollection of dates is poor, because he first stated that he made the visit with Kissinger in 1873, and it turned out that it was not until April, 1874, that Kissinger moved on his farm.

His statement that Drawbaugh told him that he was keeping it secret is either pure invention, or falsifies the defendants' story and all their other depositions.

In reply, we introduced considerable proof of dates, and left it very certain that the ram was ordered in 1877, and that it was put in in 1878, our witnesses agreeing with Draper that it was put in the year after it was ordered. Inasmuch, therefore, as C and I were the best Drawbaugh had in 1877, he must fail, because no instruments alleged to exist before C and I, nor even C and I themselves, were good enough to defeat a patent; and, moreover, since C and I were his best instruments in 1877, his whole story was a falsehood.

The defendants felt the fatal weight of these facts. They had put to Draper a direct question as to the date when the ram was put in, and had rested on his answer; but now, in surrebuttal, they begin to add to it. They did not produce any one who pretended to knowledge of the visit to Drawbaugh's shop, even from hearsay; but they called many witnesses who said that the ram was put in in 1876, and that preparations for it were begun in 1875. This was a departure from Draper's dates, though it followed the general statement he made that the preparation occupied about a year. This

cumulative evidence and change of base was met by us in rejoinder with much testimony, which completely demolished their proofs. Then they returned to the matter, and in surrejoinder called more witnesses, and then we called a few to rebut their last proofs.

This ram controversy brought nearly one hundred witnesses in the case. For the complainants, it was not very important, because Draper was only one witness more or less; but for the defendants this subordinate issue was vital. Elsewhere in this brief, at the end of this appendix, it is considered at length by itself. It leaves the date of ordering, 1877, and the date of putting in, 1878, beyond possibility of doubt. The issue has a special value. It shows a repetition of the same tactics which the defendants have applied to the main issue. The defendants have rested on the mere memory of casual visitors, who had no occasion to notice the matter nor charge their memories with it, and who testify only after the matter has been the subject of a year's talk and preparation in their village. Their testimony is not recollection, but the result of the one-sided caucus of the loafers at the village store and the village post-office. We have proved by every person whose occupation connected them with it (except Draper, as to one part of the matter), and by every contemporaneous writing or paper which spoke of it, or by necessary implication refers to it, that the recollections of their witnesses is wildly wide of the truth.

The result of the whole of this ram testimony is that the ram was ordered in 1877, and was not put in until the fall of 1878. With that as a *fact*, the importance of Draper's testimony becomes apparent; for since Drawbaugh, some time in 1877, showed to a person, whom he was bound to show the best he had, nothing more than C and I and F and B, it is certain that the whole of his story is a falsehood, and it is certain, moreover, since these instruments contain nothing more that what Mr. Bell had patented in January, 1877, and invented and used some time previously, that Drawbaugh was at that time behind Mr. Bell in his work. The moment it is established, therefore, that the Draper visit was, as we have established it to be, some time in 1877, — and it makes no difference for the purpose of this case whether it was in February, 1877, or November, 1877, because Mr. Bell's patent was in March, 1876, — it becomes certain that Mr. Drawbaugh is so far behind Mr. Bell that the defendants cannot prevail. It was

nothing but the certainty of this that made the defendants devote so much time to the attempt to proving the ram in at an earlier date; for the complainants, if they had left out the ram issue, this witness would have been but one among a considerable number, and not one of any more importance against them, so far as his date is concerned, than a good many others. As against the defendants, however, since the true date is 1877, he becomes, for the reason stated, an almost fatal witness.

These are all the witnesses on the question of dates for the defendants, except Drawbaugh himself.

No. 127. *G. W. Heiges*, p. 1176. — Saw Benjamin perform an experiment, but does not describe it and knows nothing of the results.

No. 128. *Park Benjamin*, p. 1179. — Age, thirty-three; New York; mechanical engineer. Mr. Benjamin is called by the defendants as their expert, and their only expert. If there were any conflict of testimony between Mr. Benjamin and our experts which the Court could be in any doubt about, it would be worth while to dwell on his slender qualifications and his relations to this suit and the parties. He does not profess to be an electrician, or to have any practical knowledge or special scientific knowledge relating to electricity, telephony or acoustics. He has such knowledge on these subjects as belongs to an educated mechanical engineer, who has been in practice as such for three years. Before that time he was associate editor of the *Scientific American*, and editor of one of the editions of Appleton's Encyclopædia. He has the knowledge, general, but neither definite or precise, which belongs to such a training and education. At the outset of his cross-examination he was asked to state what particular experiments, tests or trials he had made on which he based any of his conclusions, and after some fencing finally said (ans. 70, defts, ii, 1273): —

"*Ans.* I have not made any experiments, except those mentioned in my testimony, with telephones during the last two years, although I have repeatedly talked through such instruments, and incidentally remarked their efficiency, said instruments being in connection with organized systems. I have made a large number of experiments, mainly repetitions of those made by others, in order to fix electrical principles in my mind; and I suppose that these experiments have indirectly affected my conclusions. I cannot specify them all, nor

their number; perhaps it will suffice to state that they were all old and well known, and that they involved no original discovery on my part. I do not recollect having seen any experiments made by others, during the period mentioned, which have had any effect upon the conclusions I have stated.

"*Q.* 71. If the conclusions you have stated are based upon any experiments with telephones not already mentioned, and made more than two years ago, please state what those experiments were and when and where they were made.

"*Ans.* I understand this question to be limited to experiments made by me or in my presence, as before. Perhaps it may save some further questioning in this direction if I state right here that I have neither had the time nor opportunity to enter into any elaborate series of experiments or tests with telephones at any period of my life, as I think may be easily inferred from the statements I have made as to my employment for many years back."

Upon all points where he, on the one hand, and Prof. Cross and Mr. Pope, the complainants' experts, on the other, disagree, Mr. Benjamin's conclusions are overthrown by such an overwhelming mass of facts that there is nothing left to be discussed about them.

It may be mentioned also that he is not merely employed as expert, but is the Patent Office solicitor and attorney in fact for Drawbaugh and the Peoples' Telephone Company in the matter of Drawbaugh's alleged telephone inventions. This appears from the powers of attorney of various dates printed in the complainants' rejoinder (vol. iii, p. 2172). While this of course does not disqualify him and does not necessarily make his statements unworthy of belief, it imparts to him the zeal of the attorney or advocate, and gives to his opinions (and he is called to testify to nothing else) the bias which naturally arises under such circumstances. It is not usual to employ the same man in both capacities in what is substantially the same controversy. It appears, from his own deposition, that he passed several months in Harrisburg while the testimony was being taken; and as there was no scientific controversy then going on, he was evidently brought there either to learn the testimony in the case or to assist the defendants' counsel with general advice in the conduct of the examination, and no doubt his presence was valuable to his clients.

He says in terms that he agrees with the statements in Prof. Cross's first deposition in the complainants' *prima facie* case (complts, i, 21-27) as to the nature and character of the vibrations which con-

stitute articulate speech, and as to the means and method by which they are transmitted through the electric speaking telephone. He particularly says (defts, ii, 1187) : —

"I fully agree with Prof. Cross in such statements as he makes relative to the practical impossibility of articulate speech being transmitted by any telephonic system which relies upon a making and breaking of the current in order to transmit the vibrations. I am aware that the fact has been frequently published, that with Reis's instrument, which is constructed on the make and-break principle, and to which I have already referred, and with other analogous devices, certain sounds of the human voice have been transmitted, but I am unable to discover that these sounds were other than merely fragmentary, depending solely for their existence upon the momentarily continued contact of the diaphragm and point, or their equivalent, and limited, I believe, chiefly to vowel sounds. I regard it as certain that under no circumstances can articulate vocal sounds be transmitted by such an arrangement, except when continuous contact between the contact pieces exists; and even then I do not know that it has been definitely determined how exactly to adjust these pieces for the purpose, — in the Reis instrument, for example.

"I understood, as early as 1870, the inability of the Reis instrument to transmit articulate speech, and I have never since heard that it has come into use for the transmission of articulate speech; that it has, or is, practically been made capable of doing so. I am satisfied, therefore, that the use of the undulatory current is essential to the transmission of articulate speech, and conversely, I fully agree with Prof. Cross in the opinion substantially expressed by him, namely, that any electric telephonic device which does actually transmit articulate speech must operate, and operate only, through the medium of the unbroken undulatory current; so that, to illustrate, if I was shown an instrument connected with an electric circuit wire, even if I were wholly ignorant of the internal construction of that instrument, if I heard speech through it I should be convinced, first, that that instrument was not operated by a make-or-break current, and second, that it was operated by a current unbroken and undulatory. This is my own conclusion, and it seems to me also a necessary one, from the opinions and reasons given by Prof. Cross."

The rest of his deposition is devoted, first, to the expression of his views about the Bell patent and an attack on it, and, second, to an expression of his views as to the instruments produced by Drawbaugh, examined in the light of the descriptions given by Drawbaugh, and assuming those descriptions to be true. Under this latter head he considers the theoretical operation of the instruments produced and described by Drawbaugh, and also states the results which he alleges that he has obtained, in attempting to transmit

articulate speech by such of them as are in working order, and by what he wishes the Court to believe are reproductions of others which have gone to pieces.

He begins his criticism of the Bell patent of March 7, 1876, 174,-465, by examining the first four claims, and the features which he thinks are referred to by those claims. He thinks that he has found an anticipation of those claims in a contrivance made by Sir Charles Wheatstone, to count the number of times a door was opened or to count the number of revolutions of the shaft of the *Times* printing press. As these four claims are not in suit, it is not worth while to spend any time upon them; it is enough to say that they refer to a method and to an apparatus for producing a current gradually varying and never abruptly broken, and by means of it causing at the receiving station sonorous vibrations, specially adapted to be used in a system of harmonic multiple telegraphy. Nothing of the kind had ever been done before, nor did the existing state of knowledge lead to the belief that it could be done practically. The body of the specification points out plenty of novelty to support these claims, and the claims do not purport to go beyond the novelties contained in the specification. All this however is immaterial.

The claim in controversy in this suit is the fifth claim, which is a claim for

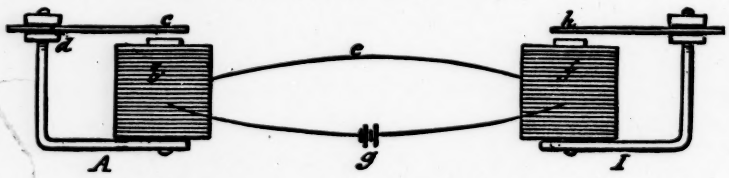
"The method of and apparatus for transmitting vocal or other sounds telegraphically, as herein described, by causing electrical undulations similar in form to the vibrations of the air accompanying the said vocal or other sounds, substantially as set forth."

Mr. Benjamin does not pretend that anything anywhere in the world existed in mechanism or in print which anticipates this claim, or the features in the specification which it refers to, or that anything existed by which vocal sounds could be transmitted so as to be recognized at the receiving end, — unless it be the apparatus of his client Drawbaugh. He then devotes a number of pages to an attempt to show that Mr. Bell did not invent a speaking telephone, did not believe that he had, did not know how to describe or claim one in his specification, did not intend to or believe that he had described or claimed one in his specification, intended to exclude it and in fact and in law did not include it, though he, in one part of his deposition (x-ans. 80, p. 1280), says that perhaps by a lucky chance

Mr. Bell, not knowing it, may have used language which might cover a speaking telephone, "a case analogous to that in which a new use is discovered for a patented apparatus, never thought of by the inventor."

Mr. Bell's patent, as has already been remarked in the body of the brief, describes two different kinds of apparatus, which, while they have certain electrical features in common, present also radical differences of construction, and in consequence of these differences they accomplish radically different results, and are intended for correspondingly different purposes, which we will briefly indicate.

Fig. 5 shows a type, several pairs of which, assembled together as shown in Fig. 6 and connected with one line wire, constitute a harmonic multiple telegraph. This apparatus works by the production, by each pair, of a definite musical note, different in pitch from that produced by any other pair. Each pair has an individuality of its own; the transmitter of a pair is to be practically incapable of performing any rate of vibration except that which its mate at the receiving station can copy; and each receiver is to be practically incapable of responding to any note or rate of vibration except that which its mate at the transmitting station is tuned to perform. It is essential for the multiple harmonic telegraph that this should be so, and to that end each of the instruments Fig. 5



has its armature formed of a steel spring firmly clamped at one end. Such a spring, like a tuning fork, or one of the springs of the comb of a music box, can practically vibrate only at one rate and with one character of vibration. The desired object is here obtained by making the spring of A exactly like the spring of I.

The description of this instrument in the specification dwells upon these features as essential.

"The vibratory current passing through the coil of the electromagnet *f* causes vibration in its armature *h* when the armatures *c h* of the two instruments A I are normally in unison with one another;

but the armature *h* is unaffected by the passage of the undulatory current when the pitches of the two instruments are different.

"A number of instruments may be placed upon a telegraphic circuit, as in Fig. 6. When the armature of any one of the instruments is set in vibration, all the other instruments upon the circuit which are in unison with it respond, but those which have a different rate of vibration remain silent. . . . The duration of the sound may be used to indicate the dot or dash of the Morse alphabet, and thus a telegraphic despatch may be indicated by alternately interrupting and renewing the sound. . . . Hence, by these instruments, two or more telegraphic signals or messages may be sent simultaneously over the same circuit without interfering with each other."

The claim corresponding to this is: —

"1. *A system of telegraphy* in which the receiver is set in vibration by the employment of undulatory currents of electricity substantially as set forth."

So far we have a harmonic telegraph, but neither a description of nor a claim for a speaking telephone.

As the vibrations which constitute articulate sounds vary infinitely, both in rate and in character, these springs *c h* are substantially incapable of either responding to such vibrations or of reproducing them.

For the latter purposes, Mr. Bell took from the instrument Fig. 5 its individuality of vibration, and gave to it the capacity to perform all rates of vibration, and all characters or "forms" of vibration. He further gave to it the ability to take up those vibrations from the sound waves produced in the air by the human vocal organs, or other sources of sound. He accomplished this by a change of structure. The changed structure employed the same general electrical principles, but the new instrument was able

1. To readily and truly perform the same varying rates and characters of vibration. whatever they might be, which the air performed when agitated by the speaker's voice.

2. To take up these vibrations effectively from the sound waves themselves due to the voice.

3. To produce, by means thereof, a new variety of electrical changes.

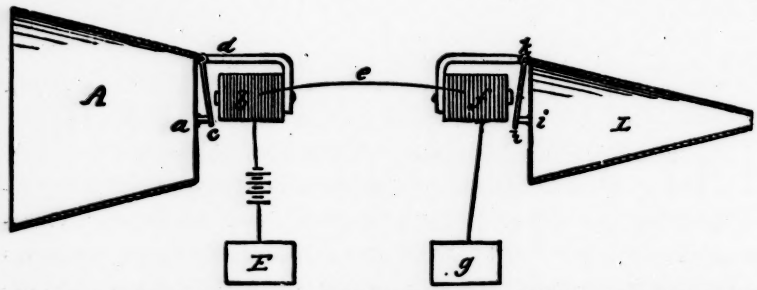
4. And thereby reproduce at the receiver the same rate and the

same peculiar character or form of vibration which was present as the receiver.

5. And since the air vibrations produced at the receiver were thus the copy, both in character and in rate, of those which acted upon the transmitter, the result was that the sound at the two places was the same not merely in pitch, but in articulate quality, or articulation.

The changes he made were twofold. He destroyed what we have called the "individuality" or individual will of the instrument by hinging the armatures *c h* to A and to I, instead of clamping them. He then attached the moving end of each armature to a circular stretched membrane, which was capable of performing substantially all rates and all kinds or "forms" of vibration, while the extended surface it presented to the sound waves enabled them effectively to lay hold of it and compel it truly to copy all their changing vibrations.

He thus reached the form Fig. 7, which, in his patent, he described as follows: —



"One of the ways in which the armature *c*, Fig. 5, may be set in vibration, has been stated above to be by wind. Another mode is shown in Fig. 7, whereby motion can be imparted to the armature by the human voice, or by means of a musical instrument.

"The armature *c*, Fig. 7, is fastened loosely by one extremity to the uncovered leg *d* of the electro-magnet *b*, and its other extremity is attached to the centre of a stretched membrane *a*. A cone A is used to converge sound vibrations upon the membrane. When a sound is uttered in the cone the membrane *a* is set in vibration, the armature *c* is forced to partake of the motion, and thus electrical undulations are created upon the circuit E *b e f g*. These undulations are similar in form to the air vibrations caused by the sound; that is, they are represented graphically by similar curves. The undulatory current passing through the electro-magnet *f* influences its armature *h* to copy the motion of the armature *c*. A similar sound to that uttered into A is then heard to proceed from L."

The fifth claim employs the language of this paragraph, and is based upon it. Its language is not found in the parts of the specification which refer to Fig. 5, and it could not be sustained upon those parts. It is as follows: —

"5. The method of and apparatus for transmitting vocal or other sounds telegraphically, as herein described, by causing electrical undulations similar in form to the vibrations of the air accompanying the said vocal or other sounds, substantially as set forth."

Upon this, which is clearly set forth in the patent, and to which attention was directed by Prof. Cross's opening deposition, Mr. Benjamin undertook to make out that Fig. 7 was intended for the same purposes as Fig. 5; that it was not and was not intended for a speaking telephone, but, like Fig. 5, was merely for a harmonic multiple telegraph. He thus sums up the result which he wishes the Court to adopt (p. 1207 at bottom): —

"In conclusion, and for the reasons which I have endeavored to give fully, what I find set forth in the Bell patent is a harmonic telephone, single or multiple . . . . I do not find, for the reasons stated, in Bell's patent of March 7, 1876, a speaking telephone, either directly, or by inference from the language used, or from the drawings. . . ."

The line of argument by which he brought himself to this condition is hardly worth following, except from curiosity.

On pp. 1201 and 1202 he reasoned himself down to a point of absurdity beyond which it would seem the human mind could hardly go. Starting with the statement proclaimed in the specification itself that Fig. 5 of the patent is not intended for and in substance is not a speaking telephone, he quotes Prof. Cross's statements, that while the electrical principles involved in the operation of Fig. 5 and Fig. 7 are the same, as they certainly are, the entire change of structure introduced and shown in Fig 7 produced an apparatus capable of transmitting vocal sounds of all kinds, including articulate speech. And he finds himself quite unable to understand that it can be possible that a stretched membrane and mouthpiece and earpiece can in any way aid in the transmission of sound by electricity, or that something which of itself is not a speaking telephone, combined with something else which is not of itself a speaking telephone, in such a way that the newly combined parts

co-operate, can possibly become a speaking telephone or that the new combination can accomplish what each part separately did not accomplish.

Later on in his deposition, pp. 1281–6, he falls into the line of his duties as patent solicitor and Patent-Office attorney for the defendants, and devotes several pages to examining the depositions of Mr. Bell and Mr. Watson, and arguing from these that Mr. Bell, as matter of fact, did not invent the speaking telephone. He apparently came to the conclusion, or at least wished the Court to believe that he had come to the conclusion, that the Bell patent did not purport to describe a speaking telephone, or an instrument which was capable of transmitting speech; that he had found that defect on the face of the papers. (See passage quoted p. 269, *supra*.) On the cross-examination he did not like quite to stand up to this, and he did not like quite to back out from it, and rather concluded that his construction and the meaning of the language of the patent would depend upon the fact *ab extra* whether the instruments described in it would transmit speech or not. This is about the only intelligible meaning that can be got from his fencing and evasive answers on pp. 1278–80.

He then undertook to show that the instruments described in the Bell patent will not talk. It is rather late in the day to start that issue again, after it has been so often passed upon; but the manner in which the defendants have attempted to sustain their side of it is enough to show the character of this witness and the manner in which they undertake to present their case. The proper way to test such a question under a patent is to put the specification into the hands of some person of the skill required for instruments of the class in question, to direct him to use the best technical knowledge available at the date of the patent, and not to try whether he cannot literally follow the instructions and yet produce an inoperative instrument, but to try whether he cannot produce an operative one by superadding the directions of the patent to the best existing knowledge; for the specification is addressed to those who wish to practise the art, and not to those who do not wish to; and the patentee is entitled to the benefit of both good skill and good will.

An apparatus which is for the first time to transmit speech, which evidently employs the most delicate movements, the most delicate changes of current, and the utilization of the most delicate phenom-

ena of sound and of electricity, calls for a constructor, either as superintendent or workman, or both, practically and theoretically skilled in the manufacture of the nicest class of acoustic and electrical apparatus. The defendants carefully avoided going to such a person. Mr. Benjamin has not the slightest practical knowledge on the subject. Moreover he did not either supervise the work or give any directions about it. He does not pretend that he employed any one skilled in the construction of electrical and acoustic apparatus. He testified (p. 1205) that he took an ordinary printed Patent-Office copy of the specifications and drawings to the Benton Manufacturing Company,

"a concern chiefly engaged in the manufacture of models and fine experimental machinery. I instructed the workman to make the apparatus, shown in Fig. 7 of the drawings, from what was shown in that drawing and described in the specification. I cautioned him, particularly, accurately and carefully to follow the directions contained in the specification and drawing; and not in any way to allow himself to be influenced by any knowledge of telephonic devices which he might have, or obtain, outside of what the patent set forth. I told him I wanted a fair reproduction from him of what was in Fig. 7 of the patent, using his mechanical skill, and departing from the exact dimensions of the drawing Fig. 7 so far as was necessary only to enlarge the device to adapt it for convenient practical use. It is proper to state here that I understood the printed Patent-Office drawing in this case, as before stated, to be a photo-lithographic reproduction of the original drawing, filed in the Patent Office, reduced in size. The instruments which I have produced are those given to me by the Benton Manufacturing Company, in accordance with my order and instructions, as above detailed. I have carefully compared them with what is set forth in specification and drawing of Bell's patent of March 7, 1876, and I consider them to be a fair and substantially accurate embodiment of what is there shown in Fig. 7 and described. They are about four times as large in dimensions as the reduced photo-lithographs Fig. 7, with the corresponding features of the instruments now produced, and find them to closely correspond."

The instruments so produced are called "Mr. Benjamin's brass cone telephones."

He tested them as follows: —

He connected a modern magneto transmitter (Tisdel form) with the receiver made by the Benton Company, and (p. 1206): —

"On listening at this instrument I could hear no sound through it

at all. I satisfied myself that the sound was going on all the time upstairs [at the transmitter] by quickly taking off the Bell and putting on the Tisdel . . . . and then . . . . I could hear speech coming clearly and distinctly, while on replacing" [what he calls] "the Bell device, I could, as before, hear nothing. This satisfied me that the Bell instrument" [he means the brass cone receiver the Benton Company had made for him] "was inoperative."

Then he tried one of his brass cone instruments as transmitter, and a modern instrument of the Tisdel form as receiver, and the result was (top of p. 1207) : —

"I could hear nothing."

Then he connected his brass cone transmitter with his brass cone receiver, and of this he says (p. 1207) : —

"Again I could hear nothing, — no sound of any kind reaching my ear through the receiver. This completed my experiments on the Bell instruments which I have produced, and thus finally demonstrated to me their inoperativeness for the purpose of transmitting or receiving articulate speech by means of electricity. In conclusion, and for the reasons which I have endeavored to give fully, what I find set forth in the Bell patent is a harmonic telephone, single or multiple, having for its important new feature, so far as I can discover, the application of an undulatory current of electricity whereby the apparatus is enabled to transmit both pitch and loudness."

As he got *no sound at all*, it is difficult to see how his experiment showed that the instruments would transmit or were intended to reproduce the pitch of sounds and the relative loudness of sounds, but not the quality of sounds, for the instruments he made and tried were as inoperative for one purpose as for the other.

He further says : —

"I do not find, for the reasons stated, in Bell's patent of March 7, 1876, a speaking telephone, either directly or by inference from the language used, or from the drawings; and I have determined to my satisfaction by actual test that the specific apparatus which the complainant has sought to prove is a speaking telephone is wholly inoperative as such."

Why was this failure?

He does not pretend that the workman employed had ever constructed any acoustic or electric apparatus before. He was simply a good model maker, and they did not call the man, nor anybody connected with the establishment where the instruments were made.

Mr. Benjamin then testifies that upon trying his apparatus it would not talk; and not only it would not talk, but by means of it he could not produce any sound whatever (p. 1207). He did not follow the patent in using it, but the vicious construction of the instruments would account for the result. It is not surprising that instruments made by such a man under such circumstances would not talk, and the moment we come to examine them we find out why. We not only find out why, but it becomes evident that Mr. Benjamin before he tried them knew they would not talk and knew why they would not talk, and knew that when he gave the directions for making them. The obvious and only difficulty about the instruments, the reason and the only reason why they will not talk, is that this person constructed them and intended to construct them with the armature so far from the electro-magnet that the one could have no more practical influence on the other than if they were in different buildings. This fact has been explicitly pointed out by Prof. Cross (complts, ii, 1722–5), and Mr. Pope (complts, ii, 1296–1302). The complainants caused to be made a pair of telephones, exact duplicates of those produced by Mr. Benjamin, but with the armatures arranged at the proper distance, and they talked perfectly well. (Prof. Cross, ans. 11, 12, complts, ii, 1722–3.) That Mr. Benjamin was aware of this fatal fact in the instruments which he produced is apparent from his own testimony. The instruments which he made were about four times the size of those shown in the Patent-Office copy of the patent, and the man who made them, either from gross ignorance or dishonesty, put the armatures at what was intended to be and in fact was about four times the distance from the electro-magnets that is shown in the drawings.

The first lesson an electrical workman learns is that the armature is to be placed as close to the electro-magnet as is possible without touching it; and the more delicate the current variations employed the more care must be taken in placing them close together. It is a part of the definition of an armature, that it is to be placed so close to the electro-magnet as to affect it or be affected by it. The defendants themselves have given that definition in terms in this case as the only proper one: see question of defendants' counsel to Mr. Bell (complts, ii, 1642, int. 434), and answer of Mr. Pope

(complts. ii, 1298, ans. 17). It is also one of the first lessons which the draughtsman making drawings for the Patent Office is required to learn, that, in drawing electrical or other apparatus, the lines for the respective parts are to be put at such a distance from each other as clearly to show that they are separate (Pope, *ub. supra*). It is of no consequence whether in a drawing of electrical apparatus the armature is shown very close to the electro-magnet, or at such a distance from it as to make the two clear and distinct, because such drawings are merely diagrams, and every competent workman and every competent telegraph operator knows without being told that the two are to be placed as close together as possible.

Mr. Benjamin's mind led him to say and wish the Court to think that he believed the invention of the speaking telephone really lay in the introduction of an adjusting screw to adjust the differences between the armature and the magnet in this apparatus (see especially Mr. Benjamin's x-ans. 84, bottom of 1284, and ans. 20, bottom of p. 1213). Referring to Mr. Bell's second patent (186,787, Jan. 30, 1877), Mr. Benjamin says (p. 1213): —

The fourth claim recites: "'In combination with a plate and electro-magnet, as before claimed, the means herein described, or their mechanical equivalents, of adjusting the relative position of the two so that, without touching, they may be set as closely together as possible.' And the specification in this connection says that 'it is important that the distance of the magnet from the plate should be as little as possible, without, however, being in contact.' Now the information which Prof. Bell here gives for the first time in a patent is not only of importance, but of very material importance, in the successful operation of a magneto-telephone. In order that any description of a speaking magneto-telephone may be one from which an operative device may be constructed, it must either set forth adjusting contrivances, whereby the distance between magnet and plate can be regulated so that the user, if need be, can find out by experiment the proper distance between them to obtain the best results in the transmission of speech, or else it must include a drawing, or what would be much less practical, a statement, showing or setting forth exactly what is the proper distance between magnet and diaphragm. In his patent of March 7, 1876, Prof. Bell says nothing on this subject; he gives a drawing showing armature and magnet separated normally by a certain distance. The only understanding posible is that the distance which he shows them to be separated is the distance which he intends them to be separated; and of course it follows that when other distances and proportions of parts shown

are increased or diminished, this distance must also be increased or diminished in like ratio."

"But, as I have already shown, an apparatus made in conformity with what Prof. Bell states and exhibits in his patent of March, 1876, figure 7, is inoperative as a speaking telephone; and there is no suggestion in that patent which would lead any one, I think, to vary the distance between the armature and the magnet from the distance there shown, or giving him any notice that there would be any advantage in doing so; and, so far as I am acquainted with the state of the art prior to the date of Bell's patent of 1876, there was nothing there which would enable any one skilled in it, from his knowledge thereof, to alter the distance between magnet and armature from that which Prof. Bell shows, with the idea of achieving the result of transmitting articulate speech. I don't know of anything being made public in a patent, even in the interval between the issue of the two Bell patents under consideration, which would lead a person who had made the apparatus shown in figure 7 of the patent of 1876, and finding it to be an inoperative one, as I did, to alter its construction or to combine with it any apparatus for adjusting this distance; and in short, Prof. Bell seems to have practically kept this very important information bearing upon the subject of making an operative speaking telephone from the world until his patent of Jan. 30, 1877, referred to before."

No man who can pretend to elementary knowledge of electrical apparatus needs to be told to place an armature close to its electromagnet, nor to add the universally used adjusting screw, if that be needed or convenient. No man who expects to continue to be thought an expert would ask for or expect such instructions. (See upon this the full statements of Prof. Cross and Mr. Pope above cited,)

The fourth claim in the second patent is one which was not sued upon; and it is to be construed as a narrow claim for a particular arrangement; it cannot be construed as anything else, because for more than a generation every piece of electrical apparatus has been provided with an adjusting screw; and whether the designer directs it or not, any workman or constructor of respectable skill will insert it. In point of fact, however, the adjusting screw is not necessary for a speaking telephone. A pair which was made like those of Mr. Benjamin did not have it, and they talked. Another pair (Nos. 55, 56), made and tried in Boston in the presence of the defendants' counsel and their expert, Mr. Benjamin, were

without it and talked. Its addition might in some cases be a convenience, but a convenience which lies as much within the knowledge of the ordinary workman as the wedging a hammer head on a handle does. But in point of fact an adjusting screw has never been used in the commercial instruments after the first hundred or so. It is not found in any of the 100,000 now in use. This is proved by Mr. Watson, superintendent of construction for the Bell Company, and is not denied (Watson, complts, i, 330–332).

It is worth noticing also that Mr. Benjamin does not seem to think of the practical every-day knowledge and experience of those actually engaged in an art.

He had referred to what he called the state of the art. In his cross-examination he undertook to define the phrase and wholly left out this element. Of course he could not have really meant to exclude it; simply it was something outside of his knowledge, experience and daily thoughts, and so he forgot it (defts, ii, 1272).

The conclusions to which Mr. Benjamin's failure to produce sound with his brass cone telephones led him are, however, sufficiently ludicrous.

The patent shows two sets of instruments, for different purposes. Fig. 5 shows an armature made of a steel reed or spring capable of vibrating only at a particular rate, and thus of giving forth or audibly responding to one particular note, very like each tooth of the comb of a music box, or each wire of a piano. Fig. 5 was intended for a harmonic telegraph, by virtue of this characteristic, and this was stated in terms. Fig. 7, on the other hand, had an armature with a hinged joint, attached to a membrane diaphragm, which was generally believed to be capable of responding to all rates and kinds of vibrations, and, by reason of its extended surface, of readily taking them up from the air. The specification, we say, clearly describes them as intended for all sounds, including speech. Now, if a pair like Fig. 7 will not produce any sound at all, which kind of sound is it thus proved to be intended for?

The passage which describes them was quoted on p. 268, *supra*.

The instruments, Fig. 7, were clearly to be operated by the voice: the specification so states. These are declared to be operated by "the human voice," and what is to actuate them is "a sound uttered

into the cone." Mr. Benjamin professed to consider that the question was whether the sound uttered was for the purpose of having the listener understand as speech what was uttered, or for the purpose of having him hear the pitch only of a musical sound, for multiple telegraphy; that is, whether Fig. 7 was for a musical telegraph or a speaking telephone. He states expressly that in his trial of the apparatus he got no sound whatever. He says, pp. 1206, 1207: —

"In listening at this instrument I could hear no sound through it at all."

"I could, as before, hear nothing."

"I could hear nothing."

"Again I could hear nothing, — no sound of any kind reaching my ear through the receiver."

The passages are quoted at length, p. 272, *supra*.

Most men, from this test, would have concluded that the particular instrument tried was badly made or badly used; but the fact that he heard *nothing* satisfied Mr. Benjamin that it was the pitch of sounds uttered by the voice and not their quality which was intended by the inventor to be transmitted; for in the same paragraph, he says (p. 1207): —

"In conclusion, and for the reasons which I have endeavored to give fully, what I find set forth in the Bell patent is a harmonic telephone, single or multiple, having for its important new feature, so far as I can discover, the application of an undulatory current of electricity, whereby the apparatus is enabled to transmit both pitch and loudness."

And this is proved by the fact that it transmits no sound at all!

We exposed all the deceitfulness of Mr. Benjamin's brass cone telephones in our pooofs in reply, and Mr. Benjamin has not dared to come on to the stand to answer these charges.

We went further than exposing these; our experts, Prof. Cross and Mr. Pope, have tried ten sets of instruments made in exact accordance with the patent, but of different sizes, some of them provided with old and well-known means of adjusting the membrane and armature, and some not, and all of them transmitted speech with practical success. Notably among them were four pairs, tried in Boston in the presence of defendants' counsel, and of Mr. Benjamin, the expert. They were made in exact and literal accordance with the

patent, and they transmitted newspaper sentences with such accuracy and ease that they would be of practical utility if no better instruments existed (complts, ii, 1709). This is the proof and testimony about them, and Mr. Benjamin has not ventured to go on to the stand to deny the accuracy of the reports of those experiments in which he participated, nor to point out where the instruments used deviated from the patent in the slightest particular.

Mr. Benjamin then undertook to make some pretty sharp criticisms on Mr. Bell's affidavit, which, filed merely on the motion for an injunction, the defendants again put into the case for final hearing, apparently only for the purpose of criticising it; we are, however, entirely satisfied that it shall be in. This part of Mr. Benjamin's testimony is in his answer 62, pp. 1265, 1266, and he says in the course of it (p. 1266) as follows: —

"Now, if Mr. Bell's statement that quality is resolvable into the elements of loudness and pitch (and that statement will be found on page 19 of Mr. Bell's affidavit, attached to complainants' moving papers for a preliminary injunction in this case, and also, I believe, in his testimony, as the question states), is to be taken as true in its application to the speaking telephone, then it seems to me that his assertion could be made into a convenient peg on which to hang the conclusion that if the instrument set forth in Bell's patent of March 7, 1876, would transmit what Mr. Bell thinks are the elements of quality, therefore, it could transmit quality itself. Looked at in this way, it will be seen that *Mr. Bell's statement, made long after he had obtained his patent of March*, 1876, might easily be twisted into a bearing on this case which would lead the Court astray even if that object were wholly unintentional.

[The italics are ours.]

The gist of these remarks, which are scandalous and dishonest on the part of this witness, if not thoroughly well founded in the testimony, is that the statement of Mr. Bell referred to was made long after he had obtained his patent of March, 1876. Will the Court believe (and, believing it, will it afterwards believe this witness) that the passage which contains the statements of Mr. Bell referred to is contained in a letter written by Mr. Bell the year before his patent came out, and copied at length into his deposition and affidavit at the place where Mr. Benjamin read them. The predica-

ment in which Mr. Benjamin found himself was made still worse by his attempts to quibble out of it on pp. 1191 and 1192.

Again, with a mind reconciled to this kind of criticism, Mr. Benjamin says (p. 1266) : —

"It will be found, I think in Prof. Cross's testimony, that he himself speaks of quality as an 'element' of sound; and, as the word 'element' simply means something that cannot be resolved into constituent parts, his very use of the term negatives its idea of its resolution."

The fact is that Prof. Cross never, in his deposition or in his affidavit, spoke of quality as an "element" of sound. He spoke of it as a "characteristic"; and when this witness, Benjamin, was invited on cross-examination (p. 1289) to point out where he found that Prof. Cross applied to "quality" the term "element," he, as usual, shuffled and quibbled over a couple of pages, and finally ended with the words "I can't" (ans. 94, p. 1290).

Mr. Benjamin, in his answer 207, p. 1209, undertakes to criticise and express his views about Mr. Bell's second patent. We have sufficiently considered that in the body of the brief, and no further comment is necessary.

He then devotes a considerable portion of his testimony from p. 1222 to p. 1264 to an examination of the Drawbaugh exhibits in connection with Drawbaugh's description of them, and to a statement of the results, which, he says, he has obtained by the use of them, or from the use of what he calls reproductions of them. Undoubtedly if you take the Drawbaugh exhibits and supply all the missing parts by Drawbaugh's *present* description of them, and cause them to operate in the way Drawbaugh *now* says they ought to be operated, they will to some theoretical extent, and in some cases to some practical extent, operate according to the method set forth in Mr. Bell's patent. But the more important question is whether those alleged to be made before the date of Mr. Bell's patent are practical working instruments. This was an all-essential fact to be proved in the case, and Mr. Benjamin, on direct examination, swore up to it, or at least held himself out to the Court as swearing up to it, as follows (p. 1256) : —

"*Q* 54. Please refer to the various instruments made by Mr. Drawbaugh, and state whether you find any, and if so, which ones, to be good, full-sized, practical working speaking electrical telephone instruments.

"*Ans.* All of Mr. Drawbaugh's instruments that I have tested I know to be good, full-sized, practical, working, speaking electrical telephone instruments; and with regard to his instruments and forms of instruments, to which I have referred in my previous testimony, but have not tested, I consider that these, by reason of their form and construction, may fairly be included in that description."

He apparently must be taken as referring not merely to the originals, which he tested, but to the so-called "reproductions" which he had described, and the tests of which he had spoken as if identical with the originals on pp. 1225 *et seq.*

It appeared to us rather extraordinary that so important a part of the case should be rested on the testimony of one witness, and he the defendants' patent solicitor and patent attorney; and we, therefore, by way of cross-examination, challenged him to repeat the tests in the presence of witnesses. The request is on pp. 1295, 1296, and the results of those tests have been sufficiently discussed in the body of the brief. They leave nothing that will be believed in that part of Mr. Benjamin's deposition. They show that the instruments alleged to have been made before D and E cannot have been practically operative instruments. *If they had been made at the dates alleged* their performance would naturally have led Drawbaugh to drop them, and neither put them into use, nor apply for a patent, and then, after 100,000 of Bell's instruments got into use, bring up his experiments as a defence for an infringer.

No. 119, *Daniel Drawbaugh*, defts, ii, 780. — He is the man whom the defendants allege to have been the first inventor of the electric speaking telephone, and the object of all this proof is to ascertain the true history of his life from 1865 to 1880. The disputed allegation of the defence is that he adequately conceived of the invention, and made a practically operative set of instruments in 1867; it is also a part of the story, necessary to give it effectiveness in law and credibility in fact, and, therefore, requiring to be proved, that, from 1867 to the time of suit, he labored assiduously and successfully to improve the instruments, and make them known to the public; for if he admitted that so startling an invention was laid aside for years, the law would conclusively presume an abandoned experiment, and no judge would believe that it had been brought into a practical form. And they say that he recognized its importance and believed it to be of greater value as a source of revenue than anything he had ever worked on.

But, along with this, they admit certain positive facts. He had been all his life a professional inventor, and had taken out a number of patents, but, up to the summer of 1880, — a period of thirteen years, — he had neither filed an application nor a caveat on a telephone, had not put any instrument to practical use, had not made for sale nor offered to make for sale any of the apparatus, had not himself used any unless it be, as they say, experimentally in his shop, attaching the instruments to wires and taking them away again each time he tried them, and nothing he had ever done had in fact given to the community any information of how to transmit speech by electricity, nor how to make instruments for that purpose, but the existence of this art in the community is due to information derived from Bell and his successors, and not to any information derived from the claimant. All this their answer admits to be a part of his history.

He was first put forward after Mr. Bell's invention had reached commercial success, and then only as a defence for a pirate.

The complainants assert that inventors do not so act about such inventions. This is the test which courts habitually apply to such cases; and where the story alleged does not, according to the ordinary laws which govern human conduct, consist with the facts ad-

mitted or established beyond dispute, the allegations and the claim go to the wall. Here, applying this established test, the admitted facts are positive proof that, if the claimant had ever tried to do anything, it was as nothing in the world, not because he believed that a speaking telephone was worthless, but because he had not got a telephone that would speak.

That the claimant did not apply to the Patent Office or put the invention into use is proof that he had not made it; and the weight of this proof depends upon the character of the invention.

"The greater the importance of the invention the less probable that if achieved it would have been laid aside and not extended itself to others interested in its use."

No invention was ever made which was calculated to so forcibly and instantly attract the attention of curious and the desire of practical men, which at the same time was so cheap to use and of such universal application in unskilled hands, as the telephone. This is obvious and was seen to be the fact when Mr. Bell made it known. When it is alleged that this invention was possessed and "freely communicated to the public" for eight years, the facts that it was never presented to the Patent Office, never put to practical use, nor noticed in print, and never sought by any one for use, will, according to the established rules of decision, outweigh any amount of human testimony which rests upon the memory of witnesses.

The answer shows that the defendants felt that these facts were so inconsistent with their claim as to displace and disprove it, unless they could find some fact by which to reconcile them. The only suggestion which the answer offers to break their force is that during all those years the claimant was so "miserably poor" that he was "from that cause alone utterly unable to patent his invention or caveat it or manufacture and introduce it upon the market."

But their story is that he spent the larger part of eight years in experimental work upon this invention. What kind of poverty is it which permits that and yet denies him the ability, when the work is done, to raise, even with the help of operative instruments, $60 to patent them, and prevents him from using a few more days to make a duplicate set of instruments for sale? What they say he did, if true, disproves the alleged inability to do the little more that was needed to reap the fruits of his alleged success.

Poverty, however great, will not reconcile the facts of his history with the claims alleged. He was surrounded by men of such means and enterprise that they could and did aid him about other inventions. He could have shown them this invention as well as the others. He could have tried to interest them in this. When it was known that he had such a thing, others would have sought for it.

Nothing but the absence of a speaking telephone will account for his history.

It appears from his own deposition, however, and more particularly from his cross-examination, that he suffered from no controlling poverty; that his own means and resources were sufficient; that his surroundings were peculiarly favorable, and that he never made any serious attempt to induce others to use a speaking telephone or to become interested in one.

Drawbaugh's deposition is the only one of real importance on the defendants' side of the case. He is to tell his story, which is to conform to the allegations the defendants have put in their answer from information derived from him, and he is to reconcile the positive facts of his history with the disputed allegations inconsistent with them. *He* is to do it. It is not enough that the ingenuity of counsel should suggest possible reasons or conceivable explanations. We are to deal with the actual history of this man; we are not to imagine reasons or excuses which might have existed, but to find out the actual fact which did exist. If the story told for him is really part of his life, we shall find it there; and the facts of his life will be the cause of all his conduct, and, therefore, the explanation of it.

Again, his deposition cannot be pieced out by any other witnesses. Others may corroborate and confirm, or may disprove what he says; but what he does not know about his own life and history will not be believed if it comes from any other man. It is significant that the defendants did not put him on the stand at the outset to tell his story, and afterwards call others to confirm it, but undertook to get his history first from comparative strangers, and then called upon him for hardly more than to fill up the gaps.

The invention of the speaking telephone is peculiar in two ways. It is the most startling invention of this century. More than any

other it is sure — and experience confirms this — to take hold of the mind and imagination of the inventor and of those with whom he comes in contact. It is, moreover, an invention of a peculiarly intellectual kind, — an invention, not merely of the intellect, but of the scientifically instructed intellect. The desire to transmit speech by electricity, and the fancy that some day it might be done, are old. Thirty years ago such hopes were expressed, and experiments to that end were described in printed books; but, so far as was known by the public at least, every experimenter, down to the time when Mr. Bell took hold of the subject, had proceeded upon the plan of making and breaking the circuit according to the methods of Bourseul and Reis and had consequently failed. It absolutely required knowledge of the character of articulate sounds and of the air vibrations concerned in their production before one could understand that such circuit-breaking contrivances were necessarily and in their nature incapable of transmitting speech, or before one could conceive of the limitations and conditions under and in accordance with which a speaking telephone must operate. Mr. Bell reached his result by starting with a thorough knowledge of these matters and reasoning out the process or kind of operation *a priori*, and then devising contrivances which could perform it. Sir William Thomson expressed the truth when he said that the speaking telephone was an instrument which "realized a mathematical conception."

Many mechanical contrivances can be reached by an ingenious mechanic with no scientific knowledge or education, and perhaps be stumbled upon almost by accident, or at any rate by one of those accidents which come to ingenious and uneducated men when at work upon a machine. But there was nothing known, nothing used, nothing practised in acoustics or electricity, which would lead a man experimenting for other purposes to stumble upon the electric speaking telephone as some chemical inventions have been stumbled upon. All that had been attempted before would not help the inventor unless he had, and not only had but deliberately and knowingly and intelligently applied, the scientific knowledge concerning the nature of speech which has been referred to.

Moreover, it is true that, while an inventor, like other men, may forget precise dates, he seldom forgets sequences of thought.

He never forgets them where the invention is one which rests almost entirely in thought, and is of a purely intellectual character. No man who invented a speaking telephone could ever forget how the conception came to him, nor what train of thought brought it. He could never forget when, how, nor by what train of thought he reached the variable resistance or carbon transmitter, or reached the magneto transmitter, nor could he ever forget the difficulties he encountered, nor the attempts to surmount them which led him from one principal improvement to another. To recall these things does not require an effort of memory. No effort could make a man forget them. On the other hand, a man who had never passed through them could not simulate them. A pretender could produce a set of instruments, assert a chronological order for them, and, if he chose, assign dates for them, but, unless he had had the experience of the inventor, he could not tell the psychological history of the invention.

In the deposition of Drawbaugh we find the assertion that he made this invention without possessing any of the knowledge absolutely essential for it. He nowhere discloses that he possessed it; he asserts, or rather the defendants assert for him, by their questions, substantially, that he did not possess it and had no means for acquiring it. The next thing remarkable in his deposition is its extreme, careful and studied baldness. It is evident that the defendants' counsel exerted his utmost skill to make the deposition a mere vehicle for putting in evidence sundry instruments, a description of them as they now exist, and an attempted assignment of dates to them. Substantially the deposition does not go beyond this. The psychology of the invention is not to be found in Drawbaugh's story. This cannot be accounted for upon any suggestion that he is not skilled in the use of language. A man who had gone through the mental experience involved in making such an invention could not be restrained from expressing it; his language, if he were an uneducated man, might be inartificial, but its sincerity would be only the more apparent. Once only in the whole course of the deposition did the defendants' counsel permit one of those questions which are invariably put to an honest inventor. Once he asked him how he reached the conception of the variable resistance form or carbon

form of the transmitter. The real inventor could not have forgotten that. This man answered (defts, ii, 804) : —

"*Q.* 150. Do you remember how you first obtained knowledge of that fact, that low conductors when under pressure would conduct the current more freely than when not under pressure; that is to say, did you learn it by reasoning it out and then testing it, or by accidental discovery, or by reading it somewhere, or by hearing it from some one, or how?

"*A.* I don't remember how I came to it; I had been experimenting in that direction; I don't remember of getting at it by accident, either; don't remember of reading it; I don't remember of any one telling me of it; I don't suppose any one told me."

The claimant has got to reconcile two inconsistent stories. One is, that, during the whole of the thirteen years before 1880, he was too poor to perfect his instruments, to make a few pairs for sale, or even to prepare and file a caveat on them. The other is, that, during all that time, he did not abandon nor indefinitely lay aside his work. It is pretty difficult to define exactly that kind of poverty which enabled a man, according to the defendants' story, to spend most of his time for thirteen years assiduously laboring on an invention which never brought him a cent, and yet which did not permit him to raise fifteen dollars to file a caveat, or sixty dollars to take out a patent, nor a week to make a duplicate set for sale, during the ten years after he had got it, so they say, in a form fit to be patented and to be put into practical use. The truth is, these two stories cannot be reconciled. In this deposition the defendants hardly even attempted to reconcile them. They made up their minds to rest on one horn of the dilemma, and undertook to have Drawbaugh swear to substantially unceasing work for a dozen years on those instruments. For the first nine years they allege only seven instruments to show for it.

It was their business to lay before the Court upon the direct examination the story of the claimant's life and occupations during that time, and an astonishing thing in that deposition is the carefulness with which the defendants' counsel kept the real truth of Drawbaugh's life and occupations out of sight, and the objections they made as the complainants proceeded to develop them. A large part of the cross-examination was devoted to bringing out all those pursuits and occupations which the defendants had carefully excluded, and thus it was proved out of Drawbaugh's own mouth that during all those

years he found time and means and resources, both of money and of leisure, to experiment with other inventions which never brought him in and hardly promised to bring him in a single cent, but which, in time, materials and expenses, cost him far more than all the speaking telephones he has produced, and absorbed his attention to an extent which, if it had been devoted to ordinary mechanical labor in the machine shop, such as it is proved he had ample opportunity to engage in, would have earned him money enough to patent a speaking telephone a hundred times over. The defendants, at the close of this cross-examination, apparently felt that their pretences in this respect were smashed to pieces, and they attempted to get out of their trouble by an excuse which was simply ridiculous. They had said that, before 1870, he had speaking telephones fit to patent, and waited ten years merely because he could not raise the fifteen dollars for a caveat or sixty dollars for a patent, and when it was proved that he had spent upon other experiments, about other and disconnected devices, money enough and time in which he could have earned money enough to have patented the speaking telephone a dozen times over, they said that he dropped the speaking telephone and went to work upon other inventions, in the hope that he might make some other invention and patent that, and out of such a patent earn money enough to take out a patent on the speaking telephone. This is one of those things which desperate men put into the re-examination of a broken-down witness. He said (defts, ii, 1114): —

"*Q.* 1739. You have testified, in effect, that, after unsuccessful efforts to induce different people to take a half interest in your telephone invention and furnish the money for procuring patents and introducing it into public use, you expected other parties to go into the manufacture of the magnetic clocks and to go into the manufacture of the improved faucets. What was your object in embarking upon the clock business and the faucet business in 1878 and 1879?

"*A.* My object was this, that I was pretty poor; I was anxious to get some party to take an interest in and run that business, to make some money by it; I was anxious also to make a raise, to have money to secure my telephone improvements; I know that I often desired to have made arrangements — get a job — that I could make some money for that purpose."

In this cross-examination also, the complainants proved out of his own mouth, though they confirmed and added to it by other proofs

afterwards, that Drawbaugh did have means and resources enough in the way of personal skill, money, credit and friends to have patented a speaking telephone at any time when he had one fit to patent.

His direct examination occupied thirteen working days and covered one hundred and fifty-four printed pages; his cross-examination occupied thirteen days and covered one hundred and eighty printed pages; his redirect occupied nearly two days and covered twenty-eight printed pages; and his recross occupied about a quarter of a day and covered three printed pages, and the following redirect filled about a page more. The time occupied is due to the fact that his counsel was unwilling to let him sit more than four hours a day, for fear he should get tired, and to the extreme slowness with which some parts of his deposition were, necessarily perhaps, taken.

We now turn to the deposition itself.

Defts, ii, 780. — Has lived substantially all his life at Eberly's Mills (often called *Milltown*), except from April 1, 1876, to April 1, 1877, when he lived in Mechanicsburg, about five miles from Eberly's Mills. In May, 1867, he was living in a red house back of the grist mill, and had his workshop in the lower story of that house; had been there for more than ten years. In the summer or fall of 1867, a company, called the *Drawbaugh Pump Company*, and afterwards the *Drawbaugh Manufacturing Company*, was formed to manufacture some of his inventions. They hired the building, formerly an old clover mill, in that village of Milltown, at the junction of the stream known as Cedar Run and the larger stream known as the Yellowbreeches Creek. This was a three-story building, furnished with water power by Cedar Run. They stocked it with machinery at a large expense, and, in the fall of 1867, Drawbaugh moved his own tools into that shop, and has had his private workshop there ever since. He has always had a room of his own, generally called Drawbaugh's office in the testimony, partitioned off in the northeast corner of the second story of the building. In this he kept his property; but he also had a bench in another part of the shop, at one time also specially partitioned off for him, and had the free use of all the machinery from 1867 down to the present time. The shop is a few hundred yards from his house. In 1868, he bought a double house and a blacksmith's shop in the village and moved into one half of

that, leasing the rest. In the spring of 1876 he sold it, and moved to Mechanicsburg into a house which he bought there and still owns. He lived in Mechanicsburg one year, and in the spring of 1877 moved back to Eberly's Mills. The first year he lived in the house called the Miller's House, being the house built for the miller, directly opposite the grist mill. In the spring of 1878 he moved into the house he had formerly occupied, directly back of the grist mill, and lived there until after the institution of this suit.

He had a wife and six children living at the time he gave his deposition. His eldest daughter is Laura, about twenty-two years old; and he states, p. 782, that her mind is so defective that it would be improper to call her as a witness. She would have been an important witness, according to his deposition, because it was alleged that she used to experiment with him on the telephone. We submit that this statement about her health is a false excuse. It appears from the deposition of Joseph Ditlow (defts, iii, surbtl, 530), that she has been married during the progress of this suit. He had a daughter Emma, older than Laura, who died November, 1871. His youngest child is about six years old. It appeared afterwards that he had a son Harry, born Oct. 18, 1867; died Dec. 25, 1881, during the progress of this case (complts, iii, 2078). This boy's age is material, because it is alleged that in 1872 and thereabouts he used to help his father experiment with and adjust and used to adjust and operate the alleged talking machine. His age shows that that is impossible.

Drawbaugh says that in 1861 he said to some unknown and unproduced persons that he had thought of conveying some kind of sound by some means (defts, ii, 783):—

"*Q.* 33. Do you remember any of the subjects of your conversation with them; if so, what subjects were talked about?

"*A.* Yes, sir; I remember some of the subjects of conversation; I talked to them about a certain machine I was working on then; I termed it a machine for transmitting sound; I can't remember any words or parts that I mentioned; I would qualify the above answer a little; I don't know that I was working upon the machine at that time, but I had my mind employed upon it.

"*Q.* 34. Do you recollect any of your statements to them about it; did you state to them how far you thought you could convey sound, or by what means?

"[*Objected to by Mr. Storrow.*]

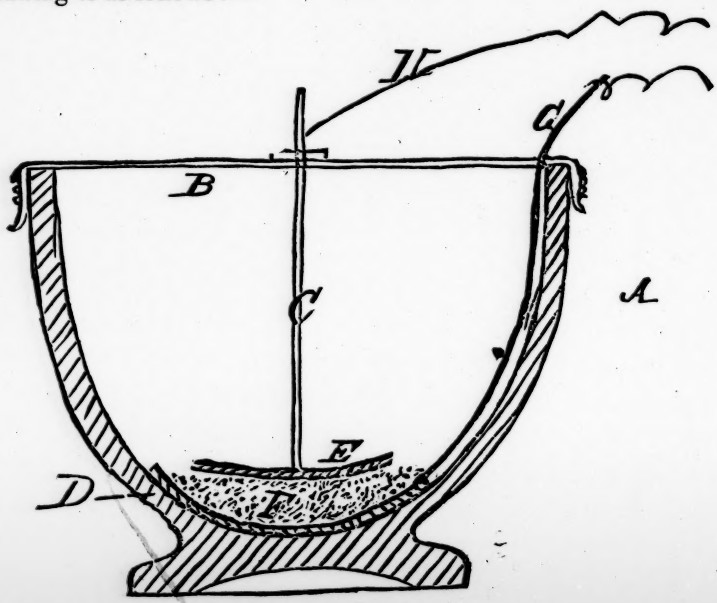
"*A.* To the best of my recollection, I stated that I thought I could convey sound to some distance, I would not be positive how far, and I may have stated that it would be by means of electricity; but I would not be positive about that, either; I can't tell exactly when I first conceived the idea of conveying sound by electricity.

"*Q.* 35. What is the best of your recollection and belief, as to whether you talked to them about conveying sound by electricity, at that time?

"*A.* I believe, as I stated before, I am not so positive that I mentioned to them about electricity; I am not so sure that I had the idea about electricity; I know that it is a great while ago that I conceived that idea, but any particular period I can't state; I may have mentioned to them, though, that it was by means of electricity; I can't remember."

Then he was asked whether he had any recollection of alleged conversations with two of the defendants' witnesses, Henry Eberly, and W. M. Lowry, about 1864–5, and he says he does not have any recollection of them, but that it is possible that their depositions may be true.

His first experimental instrument he says was what he calls a tea-cup, a drawing of which from memory he gives on p. 788, which drawing is as follows: —



B is a diaphragm of bladder; C is a metal rod securely fastened to its centre; E is a metal plate; D is another metal plate; F is some powder which will conduct electricity, though with considerable resistance; the current is brought in at H through the rod C to the plate E, passed through the powder F to the plate D, and carried off by the rod and wire G.

It is a fact that the electrical resistance of a mass of powder through which a battery current is passed will vary with the compactness of the powder. Within certain limits, an increase l pressure brings the particles of the powder into more intimate contact with each other, and the electrical resistance is thereby diminished, and the current becomes stronger. Less or relaxed pressure will, if the powder be springy enough, cause it to resume its former condition, and then the resistance is greater and the current less. If such an instrument as the cup would so work, then it would follow that, as the diaphragm B vibrates under the influence of sound waves, every time it moves downward the mass of powder will become more compact and the current stronger, every time it moves upward the mass would become less and the current weaker, and the variations of the strength of the current would in their range correspond to the range or extent of motion in the diaphragm. The stronger the sound waves the greater therefore would be the variations occurring, and the undulations produced in the current would correspond to the sound waves themselves in all their characteristics. This, we say, would be the theoretical operation of such a machine, if it were capable of performing that operation, but, in point of fact, no instrument which depends upon such action of a mass of powder with a horizontal plate alternately pressing down on it and relaxing has ever yet been able to perform this operation well enough to practically transmit a sentence. It is only by the most skilful manipulation and under extraordinarily favorable circumstances that the best form of such contrivances can transmit even a word. To accomplish this under the most favorable circumstances requires a good means of adjustment to secure the exact conditions of initial or normal pressure required, and it may need that the adjustment shall be changed from moment to moment, because the mere act of speaking to it changes the adjustment so as to stop the operation of the instrument. The particular kind of material

used for the powder is of importance. It must have the requisite conductivity; it must have the ability to change its conductivity in substantially direct ratio to the pressure and not in some different ratio; it must have the ability when the pressure is relaxed to return to its former less compressed state, because, if it does not, not only the operation will not be performed, but the rising of the plate E, if the powder F does not follow it, will produce a break of continuity between E and F, the circuit will then be broken, a loud extraneous noise be produced and articulation absolutely prevented. These were the difficulties which more than any other prevented the transmission of a sentence even with an improved instrument of this type ("F reproduced") in the tests conducted in New York by the defendants in the presence of the complainants. As to the material, Drawbaugh says (p. 789): —

"*Q.* 61. Please state what material you used for the low conductor F in the cup machine; and if you used different materials at different times with that machine, please give us an idea of your different experiments with relation to such materials.

"*A.* I did use different materials at different times; I have used earth that I got out between rocks, — clean, fine earth; I used that in combination with plumbago at some certain times; I used plumbago alone, at times, and I used fine or pulverized charcoal; I could not enumerate all; it has been a good while ago, and I don't remember all the different materials I did use.

"*Q.* 62. State whether you did or did not make a great many experiments with different materials and with a great variety of materials, to ascertain what would answer best for the purpose of the low conductor F.

"[*Objected to by Mr. Storrow as leading.*]

"*A.* Yes, sir; I did, but I can't just now enumerate all that I did try; I remember, too, of using finely divided metals, and that d[illegible]s in combination with some of the others again; I also used it wi[illegible]h plumbago, and perhaps in combination with earth; the experiments were so varied that I can't remember accurately every particular.

"*Q.* 63. By your statement that you had the wires H G attached or connected to a battery, do you wish to be understood that you had it so connected when using the machine to transmit sound?

"[*Objected to by Mr. Storrow as leading.*

"*Question withdrawn by Mr. Hill.*

"*Mr. Storrow objects that the difficulty is not removed by withdrawing the question after the witness has heard it.*]

"*Q.* 64. Why did you use a low conductor F in your cup machine?

"*A.* For the purpose of obtaining currents of different strength or intensity.

"*Q.* 65. How did the low conductor, as used in your cup machine, enable you to vary the strength of the current?

"*A.* By the compressibility of the material of the low conductor; the more compression the more current, — the stronger the current.

"*Q.* 66. Did the instrument produce different degrees of compression on the low conductor, and, if so, explain how?

"*A.* The instrument did produce different degrees; part of my experiment was by testing it with a galvanometer; the instrument produced different degrees of compression by the vibrations of the diaphragm.

"*Q.* 67. What caused the vibrations of the diaphragm?

"*A.* The sound produced immediately in front of the diaphragm; you might say, the air waves, produced by the sound, impinged upon the diaphragm.

"*Q.* 68. When you were thus using the instrument did you have an electric current passing through it, or not?

"*A.* Yes, sir; I had.

"*Q.* 69. How was that current generated?

"*A.* By a galvanic battery; the instrument was connected to the two poles of the battery by the two wires G and H.

"*Q.* 70. When you were using the instrument, was that current a continuous current, or was it intended to be broken by the operation of the instrument?

"*A.* It was a continuous current, not a broken current; it was a modified current, — not continuously of one strength.

"*Q.* 71. Explain the reason why the current was not continuously of one strength when the machine was operating.

"*A.* Because the low conductor F, being more compressed at some times than others, would vary the intensity of the current. The more it would be compressed the more would be the volume of the current, — the more volume would pass."

Of course it will be remembered that when Drawbaugh makes this statement in 1881, he has the advantage of the modern knowledge on the subject. How far his statements are simply the result of his own invention, how far they are derived from knowledge now current in the community, depends absolutely and solely upon the veracity of the witness. No witness pretends that such an idea was ever communicated to any one by Drawbaugh. Then he continues (p. 791): —

"*Q.* 72. In the use of that old cup machine for the transmission of sound by electricity, did you succeed in transmitting any sounds through it, so that they could be heard?

"*A.* Yes, sir, I did; but I don't want it to be supposed — all parts of sentences — some words but feebly; I tried sounds — different sounds — made in the way of noises; I don't remember what different sounds, but I could distinguish different kinds of sounds more distinctly than I would words; what I wish to convey by that is that I could distinguish the difference between different sounds.

"*Q.* 73. Could you or not by that old cup machine distinguish vocal sounds from other kinds of sounds?

"*A.* Yes, sir; I know that the results I had there were sufficient to encourage me to go on with the experiments."

He then states his knowledge of vibrations as follows (p. 792): —

"*Q.* 76. This old cup instrument that you have described was constructed with a diaphragm to receive vibrations caused by sound or sound waves. How did you first learn that sound had the effect to set up vibrations in solid substances?

"*Ans.* By noticing vibrations in solid bodies — the surface of a partition.

"*Q.* 77. How long before you made the cup instrument had you noticed that sound would produce vibrations in partitions?

"*Ans.* That is a little hard to say; I can't remember how long; it might have been quite a number of years; I don't know.

"*Q.* 78. Prior to making the cup machine, had you made any experiments to determine the effects of vibrations of partitions, or what could be accomplished in the transmission of sounds by the vibrations of partitions?

"*Ans.* I had made experiments — applied light bars of wood from one door to another; I remember in one particular — I passed through one room into the second room by a bar, and I found there was sound produced or transmitted by the bar — not through the air but by the bar.

"*Q.* 79. Prior to the making of the cup machine, had you made any studies or experiments upon the vibrations of the vocal organs in the act of speaking?

"*Ans.* Yes, sir; I remember I often placed my fingers on my throat or larynx, and uttered words, and the sensation produced by that appeared to be the same as the vibration of a solid body; it appeared to have the same sensation or feeling — and found that there appeared to be no cessation of vibration in words, but a continuous vibration, different from a sudden noise — from a mere tap (indicating by two or three taps upon the table); there would be an intermission between those taps that would not be in a word — that is, in some words it may be.

"*Q.* 80. Do sounds of different pitch contain the same number of vibrations per second or not?

"*A.* No, sir; they do not; the higher the sound, the more the number of vibrations.

"*Q.* 81. When did you learn this fact?

"*A.* It would be a little hard for me to say when exactly; it occurs to me it was a great while ago; I can't put a particular period; when I was a young man I used to attend singing school, and the professor used to give the philosophy of sound, in that way — high sounds increasing the number of vibrations to the second, and he mentioned, too, I suppose, the number to the second, but my mind does not retain the number."

Now that is the extent of his alleged knowledge about the character of articulate sounds. The experiment with bars of wood is fifty years old; it was performed by Wheatstone, and has long been a matter of common knowledge.

F, however, was a transmitter merely. A speaking telephone apparatus requires a receiver; he describes his work in that line as follows (pp. 791, 74, 75; 83 to 85): —

"*Q.* 74. As the cup machine was only a transmitter, you must have used with it some kind of a receiver. Do you remember what kind of a receiver you used first with it?

"*A.* The time since then is so long that I have no vivid recollection of any particular one; I had a number of crude apparatuses, but can't exactly remember the shape of any of them; I had membranes stretched over hoops, — over a hoop; I remember that; and I had electro-magnets; and the arrangement was varied; I don't remember exactly the arrangement.

"*Q.* 75. Do you recollect whether or not the receiving instruments that you so experimented with, or any part of them, were in the same circuit with the transmitter?

"*A.* Yes, sir; they certainly would have been; I couldn't have had any results otherwise."

"*Q.* 83. Please look at the machine marked 'B,' which I now offer in evidence as Exhibit B, and state what that machine was and who made it.

"*A.* That machine was made for a receiver for transmitted sounds, and I made it.

"*Q.* 84. Did you ever use that machine, or anything like it, in connection with the old cup instrument?

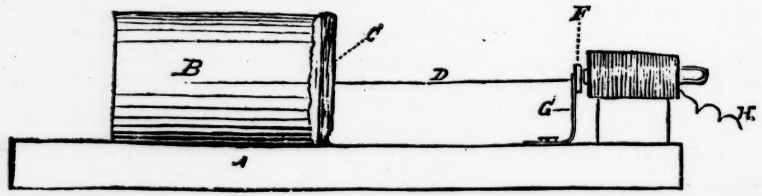
"*A.* I ain't too positive; I may have used it with the cup machine; I know I used apparatus, but I ain't too positive that I used this; I may have used this.

"*Q.* 85. Did you make this machine Exhibit B before or after

you moved your shop from the house close by the grist mill down to the building where it now is?

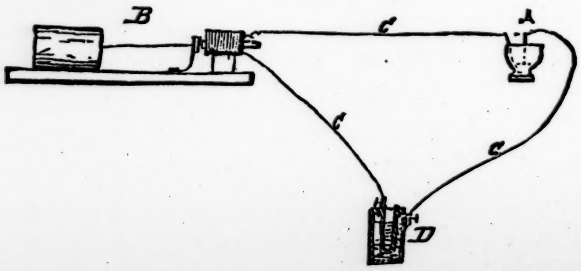
"*A.* I won't be too positive that I made it before, but I think I did."

The receiver he used with the cup is shown in the following drawing, Exhibit D, Drawbaugh Sketch No. 2, defts, ii, 794.



B is a tin can, over which is stretched a bladder C; E is an electro-magnet, the coils of which are connected with the transmitter F. The armature placed directly in front of it carried by a spring G; E is a string which connects the centre of the bladder with the armature F, and it is kept strained by the action of the spring G. Theoretically, variations of current passing through the coils of the electro-magnet E would produce motions in the armature F, and, consequently, in the diaphragm C, and the ear, being applied at the other end of B, should, if the instrument is efficient, hear the sound. It is difficult to account for the presence of the string D, unless this instrument is the survival of a string telephone. He does not explain how or why he had it.

Following the sketch of the string receiver is D. Drawbaugh Sketch No. 3, p. 795, which is his statement of how these contrivances were connected.



A was the transmitter, B the receiver and D the battery.

He further describes the low conductor F in this cup transmitter (p. 796) : —

"*Q.* 96. In the cup transmitter, in what condition was the low conductor; that is to say, was it in the form of a loose powder, or a paste, or a hard cake, or what form?

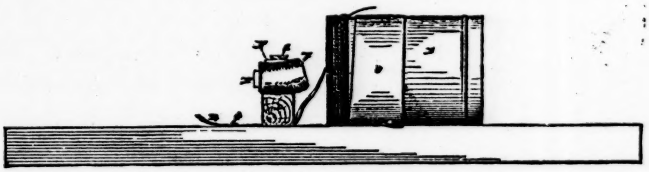
"*Ans.* In the form of a loose powder; at times finer than at others; I made changes; sometimes I made it finer than at other times, but in a moist condition generally, in the cup transmitter

"*Q.* 97. Why did you moisten the powder generally in the cup transmitter?

"*Ans.* Because in some of the materials I used, it produced better results, or I thought it produced better results, and I got in the habit of moistening it."

He says that sometimes he put over the cup a cover with a hole in its centre; that he cannot state how long he used the receiver with the string before he used the receiver in the form B: "It might have been a year, it might have been two years, — I have no recollection of the exact length of time." He says that he used different membranes on these, but never metal.

He then describes Exhibit B, shown one fourth size: —



It consisted of a tin can fastened to a board by a strap of tin. Over one end of the can was bladder, to the centre of which he says was glued an armature. Neither bladder nor armature now exist. In front of it was placed the electro-magnet, the coils of which were connected with the transmitter. The armature was placed as close to the electro-magnet as could be without touching, but not in contact.

The Court will observe a strip of tin, secured by a screw passing through a slot to the base, and extending up in front of the central part of where the bladder is alleged to have been. It is asserted that this was for a spring. We do not believe that, and have discussed its real purpose and function in connection with the

description of this instrument in the body of the brief, and also on p. 416 *infra*. Drawbaugh's testimony here about it is (797) : —

"*Q.* 102. Did you, or did you not, actually use this instrument Exhibit B as a receiver in the form in which it is shown, in Exhibit Reproduced B Drawing?

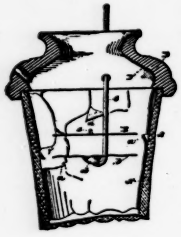
"*A.* Yes, sir."

"*Q.* 107. State whether the little metal strip or spring G was adjustable or not.

"*A.* Yes, sir; it was. There was a slot towards the outer edge of the bracket or spring, for the purpose of setting it up closer to the diaphragm by means of a screw *g'*."

He thinks that he never used but one tin tube, and began using it first on the instrument with a string, and afterwards on the instrument with a spring (p. 798).

P. 798. The next transmitter he says was the tumbler F which this drawing shows one fourth size. He describes it to have been substantially the same as the cup, except that now he has a means of raising and lowering the lower plate by the rod which passes up through the cap piece, with an adjusting screw at the top, and thus he can attempt to adjust the normal or initial pressure of the powder. When we see the worthless results of the test made with an improved form of adjustment in New York (F reproduced), it will be perceived that it would not have been possible to have got any speech with so rude an adjustment as the single rod of F, and absolutely impossible to have got any with the cup which had no adjustment; in describing the cup, he states (p. 788), "C was a metal rod *attached* at its upper end to the diaphragm." He states (p. 800) that in F he used hog's bladder or parchment for diaphragms, or something of that kind, and sometimes thin metals. All his witnesses, however, with possibly one exception, swear to bladder. As to the powders used, he swears (p. 801) : —



"*Q.* 131. State, so far as you recollect, the different changes that you made in the material or materials of the low conductor G in the tumbler transmitter.

"*A.* I made so many changes that it would be hard to enumerate them all; some of them I can; I understand the question to relate to the tumbler transmitters; I don't remember whether I used earth in

these; I ain't positive about that; in the former instrument—that is, in the cup — I had used earth; in this, or the tumbler instrument, I had used plumbago alone, and I had used plumbago mixed with other materials; that is, with carbons — and pulverized charcoal and plumbago; and, at times, I had used charcoal alone; at other times finely divided coke and charcoal mixed, and also pulverized coke alone. I had used bronze—that is, finely divided metals—mixed with carbon or coke, and used various other materials that I can't think of.

"*Q.* 132. Did you pulverize the bronze yourself, or procure it in a pulverized condition?

"*A.* No, sir, I think not; I generally had that in the shop — bronze; you generally asked for brass bronze; it is sold in the shops by the name of bronze; there are two kinds, high and low bronze; low bronze is the best, but is a little higher in price; it comes in a pulverized state; it is a known article of commerce; there are quite a number of tints in the different kinds sold; I generally used the yellow kind, that is, a good quality of brass, not tinted with other colors.

"*Q.* 133. In these tumbler instruments, was the low conductor used in the form of a powder, or of a solid cake, or how?

"*A.* As a powder; not always of the same degree of fineness, but generally as a powder.

"*Q.* 134. You have testified that in your experiments with the cup transmitter you sometimes moistened the low conductor: did you ever do anything of that kind with the tumbler transmitter or not?

"*A.* Yes, sir: but in a different way; in the tumbler transmitter, the box or cup holding the low conductor did not extend to the bottom of the tumbler, but there was a space between the bottom of the box and that of the transmitter or tumbler; in that space I put water, which moistened the conductor — by that means moistened the low conductor.

"*Q.* 135. How did the water communicate to the low conductor, so as to moisten the low conductor; and did you always moisten the different kinds of low conductors to the same extent, or not, in the tumbler instrument?

"*A.* It took up water by evaporation; that is, the low conductor was moistened by evaporation; I did not always moisten the low conductor to the same extent; I had moistened it thoroughly — placed water so that it thoroughly saturated the low conductor in the box; but I found that would not answer; a number of times it occurred that it became that way by being tipped over — that the water got in that way accidentally or by careless handling."

He was cross-examined as to the materials he used in the cup instrument, and then testified (p. 1033): —

"*X Q.* 1280. In answering Int. 50, you made a sketch of your original cup instrument, which I understand was a teacup,

and which appears to be represented in the drawing as about the actual size: do the drawings correctly represent the size of the plates E and F at the bottom of the cup, and the distance between them, as you used it?

"*A.* About as near as I remember it; I just made it by guess, or by memory.

"*X Q.* 1281. In answer to Int. 61, you mentioned several materials which you used for a low conductor in this cup instrument, such as clean fine earth, and earth used in combination with plumbago, plumbago alone, and pulverized charcoal: which of these substances did you find the best?

"*A.* I don't remember exactly; I think the carbon was the best; that is, the charcoal.

"*X Q.* 1282. When you used plumbago, did you use commercial plumbago — pulverized plumbago, such as is bought?

"*A.* It was plumbago,— I got it in lumps, rather, and pulverized it.

"*X Q.* 1283. You spoke, in answer to Int. 62, of using also in that instrument finely divided metals: did you refer to bronze?

"*A.* Yes, sir; I had used it in combination with the other low conductors too.

"*X Q.* 1284. Can you give me an idea how finely you pulverized the charcoal, bronze and plumbago, as compared with that commercial bronze?

"*A.* I can't just remember how finely; I pulverized it in a mortar, and made it as fine as I thought would be practical.

"*X Q.* 1285. Do you think you made those substances as fine as bronze?

"*A.* I don't know; they might not have been as fine as bronze; though there is different degrees of fineness of bronze.

"*X Q.* 1286. Did your experiments lead you to give a preference to one of those substances over the other, in your future use of the instruments?

"*A.* I did; yes; that is, in charcoal.

"*X Q.* 1287. How much better did you find charcoal to be than either plumbago or bronze?

"*A.* I don't remember, because I had them in combination different ways; but I think charcoal was the best, as near as I can remember; that is, I am speaking of the cup instrument; I will state that I may have used coke in that instrument; I don't remember; in making them statements there, I spoke to the best of my recollection."

"*X Q.* 1290. I judged, by your answer to the one hundred and thirty-first interrogatory, that after you were using instrument F you continued your experiments with various materials for a low conductor. You mentioned plumbago alone, — plumbago mixed with other materials, — that is, with carbon, pulverized charcoal and

plumbago, — 'sometimes I used charcoal alone; at other times finely divided coke and charcoal mixed; also pulverized coke alone. I had used bronze, — that is, finely divided metals mixed with carbon or coke, — and various other materials that I cannot think of': what was the result of your trials with the instrument F and the various materials named, — as to what was the best one and what was the best condition in which to use it?

"*Ans.* As near as I can remember, the coke and the carbon out of gas retorts — hard carbon — I think them were the best in the tumbler instrument; but I had some good results from the combinations of the different ones, — I mean the different combinations of coke and charcoal. I never used it solid in that instrument, — finely divided.

"*X Q.* 1291. Did you find any difference between the coke and the carbon out of gas retorts; if so, which was the best?

"*Ans.* I don't remember, but I judge that the gas retort carbon was the best.

"*X Q.* 1292. Do you think it was decidedly the best, or was there little difference between them?

"*Ans.* I don't remember; I just think it would be the best, — the time is so long that I don't just remember every particular experiment.

"*X Q.* 1293. Did you find that those materials were better the more finely they were pulverized?

"*Ans.* Yes, sir.

"X *Q.* 1294. In what condition did you get the best results from them, — as to being moist or dry.

"*Ans.* After my later experiments, I found that the dry carbons were the best. In the former — in using earth, and some of them combinations — a certain degree of moisture was the best."

"*X Q.* 1305. Did you have to change the low conductors from time to time? I mean the carbon and coke powders.

"*A.* I would change it frequently — very frequently.

"*X Q.* 1306. State your reason.

"*A.* By experimenting — trying different combinations, and also different degrees of fineness of the conductors.

"*X Q.* 1307. I understood you to say that you got the best results from powdered coke and gas carbon, and that the finer you made them the better they were: after you had ascertained these facts, did you use either one or the other of them continuously, and did you find it necessary to change either of them for a fresh supply of the same material?

"*A.* I don't remember that it was necessary to make any changes for a fresh supply; the changes, as near as I can remember, were experiments for different degrees of fineness and different combinations; I didn't find that I needed to change them for a fresh supply; I will tell you what I did do, sometimes: I would lift the plate

up and loosen the particles of the conductor and then adjust it again.

"*X Q.* 1308. Did you find the coke and carbon powders gave the best results when they were in a loose condition, in using instrument F?

"*A.* That is, when it was necessary to have it at a certain pressure; I don't know what that pressure would be, but that I would find out by experimenting or trial.

"*X Q.* 1309. What I wish to know is, whether, when you loosened up the powders, when they had been pressed for a time, you got better results by thus loosening them.

"*A.* Yes, sir."

He says that the tumbler F when he first used it had a bottom on, but it was accidentally broken, and then he used, later, dry low conductor (p. 803).

His witnesses alternately swear the bottom on to that tumbler and off again; but the very earliest of them swear that it was in the same condition when they saw it as now, that is, without any bottom.

Now we come to the question of how he reached the idea of using powders as a means of varying the current by variations of pressure. It was the gist of the first machine alleged. He had not invented the speaking telephone until he came to that, if he ever came to it himself. That was the time when the conception was first reached. If he invented it he cannot possibly have forgotten how he came to it. His testimony about it is this (p. 804): —

"*Q.* 150. Do you remember how you first obtained knowledge of that fact, that low conductors when under pressure would conduct the current more freely than when not under pressure, — that is to say, did you learn it by reasoning it out and then testing it, or by accidental discovery, or by reading it somewhere, or by hearing it from some one, or how?

"*A.* I don't remember how I came to it; I had been experimenting in that direction; I don't remember of getting at it by accident, either, — don't remember of reading it; I don't remember of any one telling me of it; I don't suppose any one told me."

After that the defendants never dared to ask him again how he reached any idea, or how he passed from one form of instrument to another.

He then described the results which he obtained with F and B as follows (p. 806): —

"*Q.* 158. What results did you get from such use?

"*A.* True copies, if I may use the term, of different sounds made; that is, spoken words or musical tones.

"*Q.* 159. Explain how you used to test them.

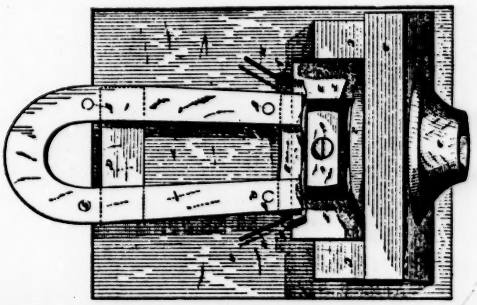
"*A.* I used to place a clock or watch in the neighborhood of the transmitter, and I would listen at the receiver — the tin can instrument; I also would have persons to speak into the transmitter, while I would listen at the receiver; and also I would speak into the transmitter while others listened at the receiver.

"*Q.* 178. During that time, and before you made instrument C, what results had you been able to get with instruments B and F?

"*A.* Sufficiently good to be heard distinctly; there were even words that were whispered; you couldn't just hear the words exactly, but could hear the whispering; I did that often; spoken words you could hear — the whole sentences; I mean words spoken out loud, and not whispering merely; I would have persons in the cellar reading printed matter — some advertisement or something, and I could hear the words that were read; and at other times I would go down into the cellar and read something, and coming up they would repeat the words to me that I had read."

He then described the circuits which he used. They were all of them from one part of his machine shop to another, except that he thinks that occasionally and temporarily he run a wire just out of doors, apparently for the sake of grounding it; but the wires which ran out of doors to ground, according to his story, did not work satisfactorily.

The next instrument alleged is C. The following is a drawing, one fourth size, of what is alleged to be a reproduction of the last



form in which he made it. He is quite unable even to allege when it was made, except (p. 809) that he had it done before he painted

a certain wagon, known as Sadler's wagon, and the proof elsewhere is (p. 199, *supra*) that that wagon was painted in the beginning of 1871. At the time he painted this wagon he says (p. 810) that instrument C

"was in a condition to transmit sounds." "It may have been made three, six or nine months before, or perhaps a year; I don't remember."

He was then asked how long he had used F and B before he had made C, and answers (p. 810): —

"*Q.* 177. To the best of your recollection, how long had you used them before you made the instrument C?
"*A.* I couldn't positively say how long; it may have been several years — two or three years. It might have perhaps been more."

He then gives from memory a long description of C, stating that it was originally made differently from what is shown by the few remaining parts, with a different mouthpiece, and with a bladder for a diaphragm, and with two diaphragms. It was intended at first to be a receiver, and had no permanent magnet to it. And he thinks (p. 812): —

"At some period after that,—I can't remember the length of time,—I took off the bar that connects the two cores of the electro-magnet and held or placed a permanent magnet to the said cores and used it in that way; I then found that I could use it for a transmitter. . . . The poles of said permanent magnet were in contact with the cores of the electro-magnet. In that modification it was used as a transmitter, and also could be used as a receiver, but was more practically a transmitter."
"*Q.* 204. Was the instrument C the first magneto transmitter which you ever made?
"*A.* Yes, sir; to the best of my recollection, it was.
"*Q.* 205. If I understand you, you invented the carbon transmitter first, and invented the magneto transmitter secondly, or as an improvement upon the original invention: am I correct in that?
"*A.* Yes, sir."

That, with the addition of a few details of construction in the first quotation, is his whole statement of the invention of the magneto transmitter. It is, perhaps, the most marvellous and startling form of the telephone, for it involves the conception and practical application of

currents derived from forces and motions so slight that the most skilled electrician would have ridiculed the idea that it was possible even to detect their existence, and, in point of fact, no instrument yet invented, except the telephone itself, can detect even their existence.

He then states the results which he alleges he obtained with C. It is enough to say that no such results could be obtained with "C reproduced" made and tried by him, his counsel and his expert, in New York. He testifies (p. 814): —

"*Q.* 188. What results did you get with the tumbler instrument as a transmitter and the instrument C as a receiver, at that time?

"*A.* Better results than I had in any former receiver.

"*Q.* 189. Please state how you tested it to ascertain its results — how frequently, etc., and whether the two instruments F and C successfully transmitted and received spoken speech or not.

"*A.* I tested it by having some one to speak or make some sounds in the tumbler instrument F, while I would listen at instrument C; I also placed or held the transmitter F in the neighborhood of a clock, while some one else would listen at C and hear the ticking of the clock; I distinctly heard spoken words through the instrument; I couldn't positively state how often — a great many times.

"*Q.* 190. Did you hear whole sentences through the instrument as thus used, or not?

"*A.* Yes, sir; I often had persons to speak to me, and when they would come to me I would repeat to them what words or sentences were spoken, and they would pronounce them correct.

"*Q.* 191. Did you ever hear whole sentences that they spoke through these two instruments?

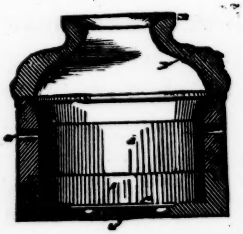
"*A.* Yes, sir; though the instrument C was used more as a transmitter than as a receiver; that is, with other instruments.

"*Q.* 192. Did you hear spoken speech through those two instruments F and C when used together, at as early a time as when you were painting Mr. Sadler's wagon, or before that time, or not?

"*A.* Yes, sir; before that time; but the exact length of time I couldn't state positively."

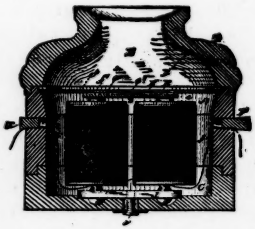
He says that he made I next after C; cannot tell how long after, nor whether it was before or after Sadler's wagon. It was specially made to be used as a receiver with C as a transmitter (ans. 195). When I was first put into the case and sworn to by a number of the witnesses, it consisted merely of a walnut shell shown in the following drawing: —

I, as it existed when first introduced in the case. It consisted merely of a black-walnut shell.



This cut is one fourth of the size of the exhibit.

Afterwards the defendants added the tin diaphragm, which is now in it, and confessedly new, and also added an electro-magnet, which Drawbaugh found in the shop and guessed might be the original, because it seemed to be about the right size. But it is an ordinary size, and there is nothing to connect it with the instrument.



The recent instrument called "I reproduced." It has an iron diaphragm, and its electro-magnet is mounted on permanent steel magnets. One fourth size.

Of results he says (p. 817) : —

"*Q.* 202. When you used the two instruments C and I together in that way, what results did you get and how satisfactory were they?

"*A.* I heard words spoken through the instrument and understood what was said through the instruments; I heard sounds of different kinds made through the instruments, and could hear distinctly the different kinds of sounds through them; the results, as I remember now, were satisfactory, and better than the results with the tumbler and C; I am confident that it was better than the original tumbler and C instrument.

"*Q.* 203. How did the results, when using C and I together, compare with the results when using F and B together?

"*A.* When using I and C together it was much more satisfactory — louder — entirely better."

He says, that I was first made with merely an electro-magnet, and afterwards he added permanent magnets, as shown in the drawing of the so-called "I reproduced," placing them in the bottom of the walnut shell, and connecting them to the heel of the electro-magnet; and of it in that condition he says (ans. 208, p. 818) : —

"It was a better instrument; it answered better as a receiver, and it could be used as a transmitter, and I have used it as such."

This change, he says, may have been made a month or perhaps a year after it was first made; "I can't get at it very clearly"; but in answer to the leading question, whether it was made before July, 1873, he says he believes it was. He says that I originally had the high mouthpiece it has now; afterwards he made a much lower one, with the thin air space, but he does not remember when that was, nor how long after he made the original. This is a remarkable change. This thin air space was reached by Mr. Bell by experiment after experiment, and was the result of the manufacture of hundreds of instruments. It is perhaps hardly known with certainty to-day why it is the best form. It is impossible that Drawbaugh could have ever reached it without either an extremely acute course of reasoning or innumerable experiments. He cannot have forgotten how he came to it if he was the real inventor of it; and yet here again he breaks down. The best account he can give of it is (p. 818): —

"*Q.* 213. Have you any recollection when you modified the shape of the top cover or mouthpiece, by making it lower, like Exhibit Modified Mouthpiece, or how long was it after you made the original instrument I?

"*A.* I do not recollect; in working on those modifications or changes, I did not charge my memory with the time; I cannot give the length of time.

"*Q.* 214. What was your object in making the mouthpiece lower than it had been before?

"*A.* I suppose it was on account of some other modifications that I had made in some instruments before; in reducing the space between the mouthpiece and the diaphragm, I thought I got better sounds; that is, I thought it gave better results.

"*Q.* 215. In what instruments before?

"*A.* I had made modifications in the tumbler instrument; that is, I had made the space smaller between the mouthpiece and diaphragm, and also in instrument C; but in them I did not come down to the extreme change, as I did in this (referring to Exhibit Modified Mouthpiece)."

Exhibit A. "It is a telephone receiver; I made it" (p. 820, ans. 224). It was made after C and I, and he says that in its original state the mouthpiece was at the centre, and the screw now at the

centre alongside of the mouthpiece did not exist. "I could hardly tell how long I used it in that way; it might have been a year, or it might have been two or three months; I can't tell the right time" (ans. 227). He used the screw, he says, for the purpose of straining and dampening the diaphragm, and (ans. 229): "I thought it did at the time benefit it to some extent." He further testifies about A (pp. 821–4): —

"*Q.* 230. What transmitter did you use this instrument 'Exhibit A' with when you first had it in the present form with the mouthpiece at one side, and before that time?

"*A.* I used it with both these instruments, C and the tumbler instrument F; the best results were with the tumbler.

"*Q.* 231. What use did you make of the instrument 'Exhibit A'? What was done with it and how satisfactorily did it work?

"*A.* I thought then it was a pretty good instrument, though it wasn't as good as that instrument there (indicating I) in its modified form with the permanent magnets — wasn't as loud; I used it as a receiver; I couldn't enumerate all the different sounds I made through it; I made all the sounds through it that I could think of; I whistled, sang and talked through it; and I remember, too, I got a party to play a jewsharp, and I heard that through it distinctly."

"*Q.* 233. When talking through the instrument how satisfactorily did it operate? State how clearly you could hear; whether you could hear a whole conversation, or extended remarks, or not.

"*A.* I could distinctly hear all words spoken; often whole sentences."

"*Q.* 236. After you put in the central dampening screw and changed the mouthpiece or earpiece to one side of the centre, did you ever make any further changes in the construction of this instrument A or not?

"*A.* I do not remember of any other changes."

"*Q.* 241. Can you fix the time when you first made this instrument A or when you first put the mouthpiece at one side of the centre?

"*A.* I cannot possibly say; I know it was after I made this instrument (indicating 'Exhibit C'), but the length of time between those two I couldn't possibly give; I can't remember the length of time.

"*Q.* 242. Mr. Jeremiah Kohler, a witness who has been examined for the defence in this case, testifies positively, on page 567 of defendants' printed record, that he saw you working at and making this machine 'Exhibit A' some time between April, 1873, and April, 1874; state whether there is or is not anything within your knowledge that would lead you to doubt the accuracy of Mr. Kohler's statement.

"[*Objected to as incompetent.*]

"*A.* There is not — nothing that would lead me to doubt the statement; it may be that I made it as early as then; I cannot recollect."

Exhibits D and E. — He says that one of these instruments was made first, but he cannot tell hich, they are so nearly alike; that both of them were made after A; that E now has a bottom cover for the permanent magnet; that D originally had one; that D was first used as a receiver in connection with other transmitters, and had a permanent magnet when first made (pp. 823–5) :—

"[*Counsel for defendants offers instruments D and E in evidence, to be marked 'Exhibit D' and 'Exhibit E' respectively.*]

"*Q.* 243. Please look at these two instruments which I have just put in evidence, and state who made them, or under whose direction they were made.

"*A.* They were made under my directions; part of them I made, and parts of them were made by Harman K. Drawbaugh."

"*Q.* 253. Were both these instruments D and E used as transmitters and receivers in their early days?

"*A.* Yes, sir; they were used together, one as a receiver and the other as a transmitter; and they were used with carbon transmitters both as receivers.

"*Q.* 254. With the exception of the removal or loss of the little plug *c'*, and its adjusting screw F, in Exhibit E, and the removal or loss of the rear cap or cover of Exhibit D, are these two instruments D and E in the same condition as when they were first made, or not; and if not, what difference?

"*A.* They are, to the best of my knowledge, except that, at a time afterwards, I made a little change in the body A of instrument D; there is a recess in instrument D immediately below the diaphragm, around the upper edge of the coil of the electro-magnet, which was cut in some time after the instrument was first made; with that exception, it is the same."

Said he made the recess, thinking it would be an improvement; but he does not think it was.

"*Q.* 259. To what extent did you use the instruments D and E?

"*A.* I used them very often; I couldn't state how often.

"*Q.* 260. Did anybody talk through them or listen through them beside yourself?

"*A.* Yes, sir; a great many persons. What I mean by that is, a great many persons who come to the shop there.

"*Q.* 261. How satisfactorily did these two instruments work?

"*A.* I considered they worked well; persons listening could hear all that was spoken through them."

"*Q.* 265. Mr. Harman K. Drawbaugh, a witness heretofore examined for defendants, has testified on p. 579 of defendants' printed record that these instruments D and E were made in January or February, 1875, before the Axle Company received its new machinery in March, 1875: have you any recollection of the fact or not?

"[*Objected to as leading and incompetent.*]

"*A.* I have no recollection of the time, but I recollect of him working on the machine; one of them was made before that time. What I mean is, there was one of them made, and Harman made or helped to make the other. It has been quite a long time ago; I can't remember the year or date of it."

These — F, B, C, I, A, D, E — include all the instruments which are alleged to have been made before the date of the Bell patent.

The defendants then undertook to have Drawbaugh state all the instruments he had made since the date of the Bell patent. They began with H, about which he testified as follows (p. 827): —

"*Q.* 267. Please look at the instrument H, which I now put in evidence, to be marked 'Exhibit H,' and state what it is and who made it?

"*A.* It is a telephone transmitter; I made parts of it; parts may have been made by some other parties; I don't remember who, but I often had George W. Drawbaugh to help me make some of the instruments.

"*Q.* 268. Do you recollect when this instrument was made, so as to fix the time?

"*A.* Not positively; I don't know any date particularly.

"*Q.* 269. Several witnesses have testified to seeing this machine either completed or in process of completion in the fall of 1876: what is your recollection as to that fact?

"[*Objected to by Mr. Storrow as leading and incompetent.*]

"*A.* The time elapsed, — just judging the time, it may be at that time or before; I had been making a good many of them; I paid no attention to the time; it has slipped my memory."

He says: "I often had George W. Drawbaugh to help me make some of the instruments." G. W. Drawbaugh, the claimant's nephew, was examined by the defendants, and did not pretend to have ever helped about any except J; which of these two will the Court believe — or neither?

The Court will also observe his expression, "I had been making a

good many of them." The allegation is that D and E were finished in February, 1875; that the *next* instrument was H, and that he was at work "making" it in the fall of 1876. Clearly, that is inconsistent with his testimony that he had been making "a good many of them" about the time he made H. It is certain from that expression that H was made not as the first instrument after a year and a half's intermission, but at a time of renewed and special activity on his part in telephone work (p. 830): —

"*Q.* 272. How did the instrument H work, — what degree of satisfaction did it give?

"*Ans.* It worked very well; much better than some others that I had; better than any other that I had prior to that time."

"*Q.* 275. What receivers did you use with it when talking or listening?

"*Ans.* All the receivers that I had previous to that.

"*Q.* 276. How plainly could you hear and understand through the receivers what was spoken at the other end of the line at H?

"*A.* I could understand very distinctly everything that was spoken through the transmitter H.

"*Q.* 277. Has this instrument H been altered any since it was first made or not?

"*A.* It has, to some extent; the bell was put on some time after it was first used; and there were changes in diaphragms; some time after it was made, I had a corrugated diaphragm, I know; I don't remember the number of different diaphragms; there was also a change in the dampening spring; it was first of brass, and then changed to steel.

"*Q.* 278. Have you any idea how long the bell was put on after the instrument was otherwise finished?

"*A.* I don't remember the length of time; it may have been some months, perhaps."

"*Q.* 282. In this instrument H could you adjust the carbons to such a degree of contact-pressure as to fulfil all the requirements of the instrument for a transmitter, or not?

"*A.* Yes, sir.

"*Q.* 283. What kind of carbons did you use in the instrument?

"*A.* I generally used carbon that I got out of the bottom of gas retorts, where the carbon accumulates; I got it at Harrisburg; just lying in the yard — just picked it up; I also used others, cut out of coke, but found that had a tendency to wear away, being too soft. I also made carbons out of charcoal myself, which, to the best of my recollection, I used. I pulverized charcoal and made it into a thick paste and compressed it; then covered it with a mortar of clay and heated it in the fire to a white heat; these carbons varied in hardness.

"*Q.* 284. What kind of carbon did you first use on this instrument H?

"*A.* To the best of my recollection, the softer carbons made of coke.

"*Q.* 285. Did you find these softer coke carbons wear out?

"*A.* I can't just say that they wore out, — they wore off. I can't just say I discarded them for that reason; I found the harder carbons answered a better purpose.

"*Q.* 286. Was this the first telephone that you ever made with an alarm bell on top of it?

"*A.* Yes, sir; I think it is.

"*Q.* 287. Have you ever made one with an alarm bell since you made this?

"*A.* Yes, sir; several.

"*Q.* 288. When did you make those several, — some time ago or recently? [*Objected to as leading and incompetent.*]

"*A.* Within the space of two years, as near as I can recollect.

"*Q.* 289. This instrument contains an induction coil: did you ever use an induction coil in connection with your telephones before you made this instrument H?

"*A.* I did, but they were not connected with the instrument, — that is, I tried them with other instruments, but the coils were lying loose upon the table. The primary current passed through the coil, and the secondary to the line. If I am not mistaken, this same coil had been used in just that way before it was placed in this box (referring to induction coil in instrument H).

"*Q.* 290. Have you any idea how long you had so tried the induction coil before you made this instrument H?

"*A.* I could hardly state how long, — it might have been two, three, four, five or six months; maybe more.

"*Q.* 291. Do you remember what instrument or instruments you tried it with before you made H?

"*A.* Yes, sir; but I can't designate the instruments without seeing them. [*Witness looks through the photolithographs, and then, pointing to figures of instruments L and M, continues his answer.*] Those are the ones."

The Court will observe that now we have got the assertion by Drawbaugh himself that L and M were made and tried with an induction coil two, three, four, five or six months, maybe more, *before* he made H. This appears still more clearly from the following (p. 833): —

"*Q.* 293. Were those instruments L and M made before instrument H?

"*A.* Yes, sir.

"*Q.* 294. How long before?

"*A.* I could hardly state that; it may have been six months; I don't know, maybe more; about that time I was making different ones, and I don't remember the time that elapsed between them.

"*Q.* 295. Were these instruments L and M made before or after the little magneto-instruments D and E?

"*A.* After, to the best of my recollection."

That agrees with what he said before; that H was not made as a new departure, but as one of "a good many" made near together.

L was originally a transmitter and receiver both, and so was M; that is, each had a horseshoe electro-magnet, which was presented to a diaphragm in the ordinary way of a magneto receiver, and between the two limbs of the magnet there were arranged the carbon contacts of a microphone. When spoken to, the microphone part operated and produced an undulatory current, which passed to a distant receiver; and when an undulatory current came to the instrument from a distant transmitter, it acted on the electro-magnet and diaphragm in the way now well known. They are rather refined instruments, neatly inclosed in black walnut cases, portable, and readily held in the hand. They had the modern refinements of a metal diaphragm, the thin air space in front of it, with a central opening. He states that each had a spring pressure back carbon electrode, with an adjusting screw behind the spring, and that the carbons were made of hard gas carbon in a rounded form. If his story be true, he went through the same experience as others, — trying to combine a microphone transmitter and a magneto receiver in one instrument, finding that it was a foolish piece of business, and he ended by taking out the microphone parts and using L and M simply as receivers. He says that he added permanent magnets to them which enabled them to be used as magneto transmitters, and which also very much improved them as receivers. He says that he varied the circuits inside the instrument, sometimes placing the two coils in series, and sometimes in branches, — multiple arc, — but did not find that these changes produce any material difference in the results.

And then, by leading questions, he was caused to say (p. 838) that he worked trying to improve the telephones, because he believed that absolute perfection had not yet been reached.

He then describes G and O, which are highly finished, and handsome instruments of quite graceful form. They were made by a

neat workman with leisure and means to gratify his tastes in the matter of mere beauty. They are carbon microphones (p. 833) : —

"*Q.* 296. What are these two instruments, G and O, and who made them?

"*A.* They are transmitting instruments; I made them.

"*Q.* 297. Were these two instruments, G and O, or either of them, made before instrument H was made, or not till after?

"*A.* They were made after the instruments L and M; I think, to the best of my recollection, that they were made before Exhibit H, but I won't be positive about that, there were so many that I have lost the exact order; I am positive that they were made after L and M."

Speaking of the receivers used with G and O, he says (p. 840) : —

"*Q.* 326. Do you remember whether the old tin can instrument B, or the flat instrument A, or the two magneto instruments D and E, were used as receivers with them?

"*A.* The two magnetos D and E were; I think A was, but I don't remember certainly; I don't remember whether B was or not; all that were in condition for use were used as receivers with them.

"*Q.* 327. Was A out of condition for use at any time? If so, when and how?

"*A.* I don't remember at any other time than when Mr. Knight was making drawings of it, and separated some of the wires."

Exhibit J, p. 841 : —

"*Q.* 328. Please look at Exhibit J, and state what it is and who made it.

"*A.* That is a telephone transmitter; I made part of it and was assisted by George Drawbaugh on parts of it.

"*Q.* 329. Has this instrument ever been modified in its construction since it was first made, or is it the same, with the exception of wear and tear, as when it was first made?

"*A.* It is the same as when it was first made, with the exception that it has been a little roughly handled."

He then described J, which is merely what might be called a double-barrelled H; that is to say, it has two diaphragms side by side, or rather an oval diaphragm with two sets of contacts, induction coils, etc., on it or connected with it, each of these sets being the same as H. This notion of duplicating the parts of a telephone instrument is one which has been worked upon a great deal by inventors in the hope that two sets of contacts would make twice the sound that one did, but, for reasons which might be demonstrated

mathematically and conform to the results of experience, they have all found that there is no advantage in it, or rather that the slight advantages which are introduced are counterbalanced by less perfect articulation. He testified about J (p. 846) : —

"*Q.* 335. State whether you can fix the time when this instrument was first constructed, and, if you cannot fix the exact time, give it as near as you can.

"*A.* I cannot fix the exact time; it may have been between the year 1877 and 1878 — thereabouts, as near as I can recollect."

His counsel got really a little out of patience with his habitual wariness not to get caught in giving any date even about an instrument which he pretended was but three years old, and pushed him for the date; but even here either his memory is not good for three years, or else he had made up his mind that he would not take the responsibility of swearing to any date. He was asked by his own counsel (p. 847) : —

"*Q.* 336. It may have been most any time, but what is your recollection about the time?

"*A.* As near as I can recollect, in them periods, or between them periods — 1877 or 1878; I can't distinctly recollect the time.

"*Q.* 337. Do you distinctly recollect making the instrument?

"*A.* Yes, sir; I do.

"*Q.* 338. Who made the case of the instrument?

"*A.* I think it was George W. Drawbaugh.

"*Q.* 339. Do you recollect whether the case or the machinery of the case was first made?

"*A.* The machinery in the case was first made, I think; I am pretty confident of that, because I generally made the working parts before the cases were made."

He next introduced P, an apparatus which is a microphone carbon transmitter and a magneto receiver, made as separate instruments, but placed along side of each other in a box large enough to contain both. The receiver has a long flexible tube, which may be brought around to the ear of the person while he speaks into the transmitter. He says (p. 847) : —

"*Q.* 343. What is your best recollection as to how long J was made before P?

"*A.* It may have been six or eight months, perhaps a year; I cannot recollect the length of time between those machines.

"*Q.* 344. Has the machine Exhibit P ever been changed or modified since it was made, or not?

"*A.* It has not, to the best of my recollection."

P. 850. "*Q.* 346. Was this instrument P actually used for transmitting vocal speech; if so, how extensively?

"*A.* It had been used similar to the other machines described; that is, I mean as extensively as the others, prior to this one; a number of persons spoke through it, and I spoke through it to a number of persons.

"*Q.* 347. How satisfactorily did it operate?

"*A.* As a transmitter, it acted very satisfactorily, as a receiver, not as good as some instruments that I had; but still you could hear and understand what was said; the instrument could also be used as a magneto instrument, speaking and receiving through the tube."

Exhibit N (p. 851):—

"*A.* 348. That is a telephone receiver, and I made it.

"*Q.* 349. State as near as you can the time when you made this instrument N.

"*A.* It is a little hard for me to state the time, just as in the others. Working on so many, I have entirely lost the time of this one and others; I couldn't give the accurate time of any of them; not all, but some of them; C instrument I had circumstances to fix the time by; them that I had no circumstance to fix the time by I can't give the time of.

"*Q.* 350. Please approximate the time of making instrument N as nearly as you can.

"[*Objected by Mr. Storrow.*]

"*A.* I am perfectly satisfied that it was made before Exhibit P.

"*Q.* 351. Was it actually used as a telephone receiver; if so, to what extent, and how satisfactorily did it operate?

"*A.* I used it as a telephone receiver; that is, I spoke through it, and others spoke through it; I thought it was a good receiver, I thought better than any others that I had previous to that."

This instrument obviously was the last receiver he made, or the last instrument before the compound instrument P. This is the instrument which has the colored cords, — the green cord and the red cord, — with wires inside to make connections. It will be remembered that one of the witnesses who selected this on account of its cords, and perfectly well recognized it, — it being the only one that has colored cords, or is alleged ever to have had them, — was a witness who swore that his last visit was in 1876 (J. T. Smith, p. 232, *supra*). It was not made until several years afterwards.

Exhibit Q is a telephone receiver substantially like N. No date is assigned to it.

K is another distinct type of instrument, one form of which was invented and patented by Mr. Edison, publicly exhibited by him many years ago as his invention, being a modification of a telegraph instrument he made, known as the motograph. In its various forms it has been invented or modified by Mr. Edison, Prof. Dolbear and Mr. Anders. A wheel opposite the centre of the diaphragm, and behind it, with its axis parallel to the plane of the diaphragm, is turned by hand; a flat piece of metal fastened to the centre of the diaphragm, and perpendicular to it, rests on the circumference of the wheel, and by a spring or other equivalent contrivance is pressed on to the wheel; when the wheel is turned in the proper direction the friction between the circumference of the wheel and the piece of metal which bears on its circumference and is fastened to the centre of the diaphragm draws the diaphragm towards the wheel; the pull on the diaphragm will depend upon the amount of friction developed, which, under any given circumstances, depends upon the pressure of the flat piece of metal on the circumference of the wheel; the greater the pressure the greater the pull, and the greater deflection of the diaphragm. An electro-magnet connected with the line wire is arranged immediately under this strip of metal, and the more magnetic it becomes by the current the harder it pulls the strip of metal down, the greater the friction developed, and the greater the pull on the diaphragm. In this way variations of electric current vary the friction developed and the consequent pull on the diaphragm, and thus the diaphragm is set into vibration. It is a contrivance which makes a very loud noise, but rather imperfect articulation. Drawbaugh says he thinks he made it in 1879; and Mr. Edison had exhibited his before that in public. The claimant says of it (p. 855): —

"*Q.* 366. Was this instrument K practically used or not?

"*A.* I had tried it, but did not get any good results, but heard spoken words through it; when using it I found the jar or noise produced by turning the friction roller drowned out the results of the articulation or sound of the voice.

"The friction roller was intended to be moved by clock work, — a continuous motion; but that portion was never applied."

He says that K was never finished.

He then passes from his own instruments to general matters (p. 856): —

"*Q.* 373. Have you made applications for Letters Patent on your electric speaking telephones?

"[*Objected to as calling for secondary evidence, and immaterial.*]

"*A.* Yes, sir.

"*Q.* 374. About what time did you make your first application for Letters Patent on the telephone?

"[*Same objection.*]

"*A.* In July, 1880."

He says that his son Charles was born about 1870 (p. 857): —

"*Q.* 377. Is the telephone in any way associated in your memory with the time of his birth? if so, state the fact.

"*A.* Yes, sir; some time after his birth,—say a week or ten days,—I took an instrument to the house that I was living at then; my wife was upstairs in bed; I gave her one of the instruments and told her to listen, I would go down stairs and I would speak to her; I did so, and she said afterwards that she heard the words that I spoke through it; I do not remember what the words were; the instrument that was used was, I think, the C instrument; I am pretty sure; I won't be too positive, but I think that was one of the instruments; I had a receiver with it, but I don't remember which one I had.

"*Q.* 378. Did you have batteries connected with it?

"*A.* Yes, sir."

He says that he never made or owned a string telephone, and that no one ever talked through a string telephone at his shop; that he never made a make-and-break telephone, or attempted to, until within a year or two past; that he invented each and all of the instruments produced (pp. 857, 858).

He says that he went to the Centennial, and was there Oct. 17, 1876; the visit lasted four or five days, and Mr. George Leonard went with him. It was the only visit he made there. Some time before that — he does not remember how long, but not a great while — he had heard that some one beside himself had invented a speaking telephone, and got an impression that it was on exhibition. He hunted but did not find it. He saw something which his counsel urged him to say was Gray's harmonic telegraph, but he said that he did not know that it was or whether it was or not. He says that he did not see anything like the instruments produced by Mr. Bell as the instruments he exhibited at the Centennial (pp. 858–869).

Having failed to get him to name dates, or to express himself with even a positive belief as to dates of any of his instruments, his counsel next tried to get him to name certain epochs. He was asked what instruments he had invented or made prior to the time when the Axle Company commenced their operations, which was in the spring of 1875 (p. 861) : —

"*Q.* 401. Please indicate all the electric speaking telephones that you had invented or made prior to the time when the Axle Company, composed of Bear, Grove and others, commenced their operations at your shop. I mean of all the instruments in evidence, and including the cup transmitter. Which ones of all these had you invented and made prior to the beginning of the Axle Company?

"*A.* The teacup instrument, the tumbler instrument Exhibit F, the tin-can instrument Exhibit B, instrument Exhibit C, instrument Exhibit I and Exhibit A, and the magnetos Exhibit D and Exhibit E; those are the instruments, as near as I can recollect; and I had modifications of these instruments; I won't positively say that D and E were prior to the Axle Company, but I know that at the time the Axle Company was running I had them there; it may have been prior to the starting of the Axle Company; it may be, but I don't want to be too positive; I refer to Exhibit D and Exhibit E."

Considering that the Axle Company's business was not wound up until the fall of 1876, we have got the oath of Drawbaugh himself that he is unwilling to say whether D and E were made before the date of the Bell patent of March 7, 1876. He will only state that they were made at the time the Axle Company was running. The defendants were so much disturbed about this that they, in the latter part of his deposition, a number of days afterwards, tried to lead him up to saying what they wanted; or, rather, tried to put a statement into a question in the hope that he would confirm it, which, however, he did not and would not do. On the redirect examination the following occurred (p. 1095) : —

"*Q.* 1611. The little mageto machines D and E, if I understand you and other witnesses, were made about the time when the Axle Company commenced operations; they were not, if I understand you correctly, the first magneto telephones that you had made.

"*A.* They were not the first; C was the first magneto transmitter, and I was a receiver; some time after that, I used I as a magneto transmitter also."

Then, having referred to other instruments produced, he began to refer to non-existing instruments as follows (p. 861) : —

"*Q.* 402. State whether or not the machines here in evidence, including those marked F, B, C, I, A, D, E, and including also the old cup transmittter, of which you have put a sketch in evidence, and including also the modifications to which you have referred in your testimony, include all the electric speaking telephone instruments which you made from the time of the original cup transmitter to the time of the little magneto telephones D and E.

"*A.* No, sir; not all; at the time I was experimenting I would often make experimental parts — cases, you know, with coils and magnets, and afterwards would make more complete machines — complete cases; that occurred a number of times.

"*Q.* 403. What became of these crude or temporary structures that you so made preparatory to making the more complete forms?

"*A.* I could hardly state what became of them; they would lie about the shop for some time and then become destroyed in some way; I don't know what."

No witness, however, testified to anything which can be referred to any of these alleged experimental forms. There was evidently one instrument of some kind, which we believe to be a string telephone, repeatedly referred to by different witnesses, not produced, and not described by Drawbaugh at all; but it could not have been a temporary instrument, for the dates assigned by the different witnesses to it run all the way from 1870 to 1876.

Christian Eberly testified that he saw A before Dec. 22, 1870. That was too much, even for the defendants. But Drawbaugh, with his either worthless memory or determination not to make any statement of dates, would only say about it (p. 862) : —

"*A.* 404. I didn't think it was as early as that; I may have been mistaken, but my recollection does not run back quite as far."

"*Q.* 405. State whether you have or have not any recollection of that instrument A prior to the time when the Haucks bought out the faucet business in July, 1873.

"*A.* I can't connect it with that circumstance, to the best of my recollection; I can with the Axle Company; it was prior to the Axle Company, I know."

Patenting the Telephone (p. 862) : —

"*Q.* 406. A good many of the witnesses who have been examined for the defendants have testified that you were at various times

talking of patenting your electric speaking telephone invention: what is your recollection about that? Did you intend to patent it or not?

"*A.* Yes, sir; I intended to patent it; I had spoken to a number of persons to assist me; I would state to them that I would give them an interest in the invention for them to furnish the money to have it patented.

"*Q.* 407. Why did you not patent it with your own money?

"*A.* I didn't have any money.

"*Q.* 408. At how early a time did you have the intention of patenting this invention?

"*A.* I could hardly say how early; I know it was at an early time; I know I spoke to persons even at an early time; I spoke to Mr. Christian Eberly; it may have been prior to 1870; I spoke to Frank Lee; he has been dead a number of years, I don't know how long; I spoke to them about taking an interest in this apparatus, then termed a talking machine."

"*Q.* 411. When did you consider the invention sufficiently complete that you were desirous of patenting it in the form in which you then had it embodied?

"*A.* I could hardly remember the year or give any particular date, but at an early date; at the time I showed it to those parties, I was desirous of having it patented, but some of those parties tried it and seemed to think it was not sufficiently complete; that it ought to be so that it could be placed on a table, and would talk out; that seemed to be the idea; I would then say to them that it could be greatly improved; that I was not yet through with my experiments; that is, that I could make it a great deal louder than it was.

"*Q.* 412. At the time that they tried it and seemed to think that it was not sufficiently complete, or, in other words, loud, were you able, by putting your ear to the receiver, to hear and understand what was spoken into the transmitter at the other end of the line, or not?

"*Ans.* Yes, sir; I could hear, and others heard also, what was spoken through it?

"*Q.* 413. Was it their idea that the instrument should speak loud enough for a person to stand away from the receiver and hear what was said?

"[*Objected to by Mr. Storrow as leading, as calling for hearsay, and as calling for ideas of other persons.*]

"*Ans.* That was the impression I got; that was the idea they had: that it should speak loud enough that they could hear at a considerable distance from the receiver the words spoken.

"[*Same objection.*]

"*Q.* 414. From the time when you first invented the old cup transmitter, down to the present time, state whether you ever have or have not, at any time, laid aside and abandoned your telephone

invention, with no intention of ever resuming it. What is the fact about that?

"[*Objected to as incompetent.*]

"*A.* I have never abandoned it, from the earliest time of working at it; I have left it lay for a time, that I was compelled to work on other work, but never abandoned it.

"*Q.* 415. For how long a time did you ever let it lie, at any one time, without doing anything at it in the way of study, experiment, or the making or testing of instruments?

"*A.* I could hardly say how long I left it lie at one time; it might have been, maybe, six months sometimes that I would not do any work on the machine, but I don't suppose there was a week but what I was engaged in the way of studying on it.

"*Q.* 416. Why were you compelled to let it lie at times and devote your attention to other work?

"*A.* I was compelled for the reason that I was poor. I had a large family to maintain.

"*Q.* 417. Was the maintenance of your family dependent upon your daily labor, or not?

"*A.* Yes, sir; it was.

"*Q.* 418. Did your wife and near relatives endeavor to encourage or discourage you in your work on the telephone?

"[*Objected to as incompetent and hearsay.*]

"*Ans.* My wife and my brothers discouraged me all the time.

"*Q.* 419. Which of your brothers was most opposed to your working on this invention?

"*Ans.* John B. Drawbaugh.

"*Q.* 420. Did he make a good deal of opposition to it, or not?

"*Ans.* He did, a good bit; he would often speak to me about it; and to avoid that I would often hide the instruments when he would come to the shop.

"[*Objected to as hearsay.*]

"*Q.* 421. Were you subjected to any ridicule in the community where you lived, by reason of your telephone invention, and your work upon it, or not?

"*Ans.* Yes, sir; a good many persons there used to laugh at the idea of working upon a machine of that kind,—I mean in the village that I lived at.

"*Q.* 422. Prior to the introduction of speaking telephones into public use in this country, did you ever learn of your sanity being questioned by reason of your work upon your talking machine?

"*A.* That has been said by a number of persons, but not in my presence — not that I can remember of.

"Other persons would tell me that they said that they thought by my working on it that I was crazy — that it was talked of in the store.

"[*Answer objected to as hearsay.*]

"*Q.* 423. At how early a time did you hear of such remarks being made?

"*A.* At an early time; about the beginning of my work, and along for several years, I guess, — my work on these instruments I mean."

Now this does not agree with the testimony in the case. The defendants' witnesses produced in surrebuttal swear that, in 1867 and 1868 and 1869, Drawbaugh's talking machine was spoken of as an accomplished fact (if their story is to be taken as true), and that people wished him luck and success in it. The Court knows that no man was ever thought crazy because he had *succeeded* in making a talking machine; he might have been laughed at if they knew that he worked for years in the attempt to make one and never succeeded. One witness says that the talk was "that it would be a good thing if he gets it accomplished" (p. 44, *supra*).

If they believe or expect any one else to believe this story of *family* opposition to a SUCCESSFUL instrument, *why do they not call Mrs. Drawbaugh? They have not done it and do not dare to.*

Poverty. Then the defendants (p. 865) went into the question of poverty, and, under leading questions, the claimant assented to the statements made by his counsel, that the telephone consumed much time which would otherwise have been devoted to supporting his family; that from time to time, and often, he was compelled to stop working on it to get clear of debt, which he did reluctantly.

The defendants then went into some of the details of his finances; they described his sale of his faucet patents, stating the money which he had received from them, — over $5,000 in cash and $1,000 in stock, — stating the way in which he received the money, part in cash and part in notes which were afterwards paid in instalments, and that at the time when he first received this money he was poor, and had to use a part of it immediately for the support of his family; that he gave more than $1,000 of it to his father. These matters have been fully gone into in the body of the brief and need not be here repeated. But every now and then it appears in the course of this testimony that whether he had cash or not he did have financial resources, for at some time or other — apparently about 1868 — he borrowed five hundred dollars or thereabouts from his neighbor, David Ditlow. He has forgotten how much, and does not remember

much about the transaction; so he went to David Ditlow while testifying, or just before he gave his deposition, to ask about the facts (p. 879). All through his financial statement, which covers many pages of his deposition, the Court will perceive that he has not any definite or reliable recollection about anything. He deals solely in generalities, and the moment these become important, he says that he won't be positive or cannot be certain. So worthless is his memory, that his counsel finally had to put to him questions of this form (p. 879): —

"*Q.* 499. What is *the best of your recollection and belief* as to where you got the rest of the money from that you paid to the company in assessments and instalments up to June 10, 1868?

"*Ans.* *To the best of my recollection and belief*, I got it from the parties who had purchased interests and given me their notes; it was part of the purchase money which they paid me for their interests."

The "recollection and belief" of the interested claimant to prove a fact!

P. 871. He tells the remarkable story of the loss of one hundred dollars by the death of George Miller. The depositions of Darr and others, abstracts of which are near the end of the abstracts of complainants' proofs in reply, show that this story is pure fiction.

Out of the money received from the Faucet Company, he testified (p. 876) that he bought a double dwelling house and blacksmith shop in Milltown, contracted for in 1867, and which he got possession of in the spring of 1868. The purchase money was $2,310. He occupied it, living in one half himself and letting the rest to Daniel Fettrow for $110 a year, until he moved to Mechanicsburg in the spring of 1876. There was a judgment lien, which, in Pennsylvania, is the ordinary substitute for a mortgage, on the house when he bought it; it stood for a number of years, — for about six years, he says, — and he discharged it and paid it off, according to his story, in the summer of 1873. At that time the affairs of the Faucet Company had been wound up, and he received $425 as his share of the proceeds. Out of that he paid this long-standing encumbrance on his house, — an encumbrance of merely $300 on a house worth $2,300. It will be difficult to make the Court believe that he could have been very much pressed for the

necessaries of life, or difficult to make the Court believe that he was very anxious to have $60 to spend in taking out a patent on a speaking telephone that he had been working six years for, when the principal use he made of this considerable sum of money was to pay off so small a mortgage. He could readily have found some one else to take the encumbrance. Plainly, he had no present need and no pressing call for the money for anything else.

He then undertakes to state many payments of various sums, large and small, which he made between 1867 and 1876. His memory about them is bad; whenever they are not proved by papers produced, or whenever the papers produced are to be supplemented by his memory, we generally find his statements false. Thus, his statement of the matter of the Kissinger-Leonard note (p. 894) is substantially the exact contrary of the fact. This is fully stated on pp. 241, 242, *supra*.

The *proved* errors in this part of his deposition account for money enough to pay for a patent fifteen times over. As a financial statement it is worthless and untrue on its face; for the payments named are about $1,000 greater than the receipts named; and in addition to this was the whole support of his family for ten years. Not more than $200 or $250 of the payments named were for that purpose. For a full statement of this and the detailed exposition of his reckless and false statements see the abstract of depositions of Natcher *et seq.* in complainants' reply, *infra*.

On pp. 888, 891, he states the matter of his sale of his house at Eberly's Mills to Daniel Fettrow in the spring of 1876 for $2,200, of which $1,200 was paid in cash, and $1,000 remained in consequence of an encumbrance on the property, and the purchase of a house at Mechanicsburg from E. W. Wise for $1,700, of which he paid $1,000 in cash and gave three notes of about $240 each for the balance, secured by judgment liens, with stay of execution for several years.

P. 898. His accounts with Wilson N. Miller.

P. 897. Account of the money he received from the Clock Company in the spring of 1878, and his disposition of it.

Two responsible men, whose accounts with him have been produced (Bayler, p. 47 *supra*, and Fettrow, p. 100 *supra*), were

never pressed for the money due him; each of those men generally owed him enough to pay for a caveat, at least, if not for a patent. This *fact* is worth a hundred statements that he was "poor." It also appears that his credit was good. He was once refused credit by Zacharias & Co. until he should pay up what he owed; but no other man declined to trust him. In this part of his deposition it appeared that a number of judgments were obtained against him in the course of twelve years, and these were urged as proof of poverty; but they were not. Creditors trusted him; they got judgment because he was a real-estate owner, and the judgment gave a lien and good security, and then the creditor was easy. He was constitutionally averse to paying his debts till pushed, but in all these years *his property never was levied on;* when he made up his mind that he had better pay, the money always came. And so he would have done about a telephone if he had had one to patent.

Pp. 898, 899. He refers to the matter of his occupation as solicitor of patents. This is fully gone into in the body of the brief; briefly stated, it is thus: He alleges that he was unable in all the years between 1867 and 1880 to file an application for a patent on his telephone,— not because he did not have a telephone, but because he had no means of preparing an application or even a caveat. Upon that question, we introduced in the opening affidavits proof from a deposition given by him in the faucet case in 1879, that he had prepared applications for himself and for others, and, as he was a good draughtsman, and had, if his story be true, good working telephones of a suitable size for models, it was foolish for him to expect the Court to believe any such inability to prepare a caveat or an application as he alleged existed. This was a pretty serious fact for the defendants to get over; they undertook to do it by having him swear that he could not prepare an application or description of such an invention, and that he knew he could not. Whether he was thoroughly competent or not is a question of not much importance, if he believed he was. So on pages 899 and 900 he states very strongly that he knew he was not competent to draw a specification, and never thought he was. He was cross-examined on this subject (pp. 929–932), and did not get along well with the cross-examination. Finally we produced and put into the case his own adver-

tisement, published in the summer of 1874, in which he held himself out in terms as an "inventor, designer and solicitor of patents." (See the card, p. 106, *supra*.) Besides the fact proved by those advertisements, — that he did *believe* himself capable of drawing, at least a caveat, — the Court must see that his whole testimony on this subject was a deliberate falsehood, and that he would never have sworn as he did if he had supposed that we should get hold of that card. He deliberately lied as to the fact which he perceived that his counsel thought necessary, and he supposed that he would escape detection. That is a pretty bad record for a claimant on whose honesty his case so much depends.

P. 902. His attention was called to the deposition of David M. Ditlow, who described an instrument which he listened to at Drawbaugh's shop as if it were a string telephone, and Drawbaugh was obliged to say that no instrument answering to that description was there; that he thinks the witness must have referred to Exhibit B. Evidently Ditlow knew that it was not B which he saw. Of course the defendants had shown him the instrument before they put him on the stand, and he had declined to recognize it. (See Ditlow, p. 188, *supra*.)

P. 903. He describes a funnel or loose tube of paper, which he put to the instrument B, but of all who swear to B there was only one witness,—Bayler, — or perhaps one other, who pretends ever to have seen this alleged funnel or known anything of it.

P. 903 is the reference to H. C. Springer, referred to p. 60, *supra*.

Pp. 904 to 907. He puts in evidence the so-called reproductions. It appears that they were made by him and his brother, under his direction, at his own shop, while the testimony in this case was going on, and for the purposes of this case. They were put in evidence Jan. 11, 1882; the date is material, because it appears that they were tried by Mr. Benjamin, the defendants' expert, in December, 1881.

Before the spring of 1867 (p. 908) he did machine-shop work, — making models and making various machines for sale. Among other things he made a nail-machine feeder and a measuring faucet, but for each of these he found partners who furnished all the

money needed for materials, and who not only furnished that but paid him for his time spent on them as he went along. The quotations about this are in the body of the brief at length.

The answer asserted that he was "totally destitute of proper tools, materials and appliances." His cross-examination as well as the evidence of some of the other witnesses showed that he did have an ample supply of tools and machinery, and from 1867 down to the time of the suit he had the free use of a well-stocked machine shop, in which there were at various times from five to fifteen thousand dollars' worth of machinery and machine tools run by water power.

Pp. 920–5. He gave such description as he was able to from memory of the arrangement of the rooms and machinery in the shop. It is substantially correct as to facts, though with a few errors in dates, Drawbaugh saying as usual when he comes to dates that he can't give any, and does not remember the times. There are so many references to the partitions, etc., in the testimony, that their location and the dates of the changes have been stated by themselves in the body of the brief.

P. 925. Drawbaugh states that he had long consultations with the defendants' counsel before they prepared their answer, told them what he wished them to understand as his story, went round with them for a number of months visiting witnesses, taking the affidavits of some and not of others. There was no legitimate reason for taking those affidavits. They were merely in order to get from the witnesses *ex parte* statements under the influence of one side only, and before the controversy became known, with a view to tie them to one view of the case or to use against them *ex parte* affidavits so obtained in case any of them should ever be called as witnesses for the Bell Company. The persons whom they visited and did not call constitute a large number of our witnesses.

Then he was inquired of a little more particularly as to the dates of some of his instruments. He could not tell how long before 1870 F and B were in a condition which he thought fit to patent (p. 927); but he is sure (ans. 1616, p. 1096) that they were fit to patent before that time. He rather thinks that in 1868 or 1869 he considered them fit to patent. When asked when C was made, he says (x-ans. 782, p. 928):—

"I don't know: I don't remember the date, you know; I am inferior in memory of dates; I paid no attention; it may have been, — I cannot say; I don't know whether it would be a fair conclusion [that it was made in 1869] or not."

He says in substance that C may have been made as early as the first of 1869, and it may have been made a year or two later (p. 928).

P. 934. He referred to the fact, that, although he used the machinery of the Faucet Company, it was for an equivalent, because they used some of his. On the same page he spoke of the Millbush Company, which carried on business at his shop, and he named the members, or so many of them as he could recollect. The defendants afterwards called Bergner, one of them; but he had so little to do with the business that Drawbaugh had forgotten his existence.

He had testified, on direct examination, that he had never read any books about electricity, and, so far as could be inferred from his memory, he had never read anything except one or two of the ordinary small school natural philosophies. On his cross-examination his reading increased a little. He remembers to have read some books about telegraphy, and, what is of a little more importance as showing the character of the man, it appears that in one of his books he read a full account and description of an electric clock to be run by earth batteries. The significance of this is, that he produced the clock of that description which he made the neighbors believe to be an entire novelty with him. He stole it, and he knew he stole it, altering some of the details of construction merely.

P. 936. He was cross-examined about the persons whom he alleged he had applied to to put money in the speaking telephone, and his memory appeared to be very bad on this subject. The matter of alleged applications for aid and the untruthfulness of his answers are considered in the body of the brief.

The defendants had represented that Drawbaugh, during eight, ten or a dozen years, had devoted his whole time to the talking machine, laying it aside only occasionally to take up some profitable occupation in the way of days' labor when actually required to support his family (p. 322, *supra*); that he spent no money except to barely support his family, and on the talking machine:

that his resources were so limited that he could not raise a cent to caveat or patent his talking machine, or to make one for use.

He said (p. 862): —

"*Q.* 407. Why did you not patent it with your own money?

"*A.* I didn't have any money."

"*Q.* 414. From the time when you first invented the old cup transmitter, down to the present time, state whether you ever have or have not, at any time, laid aside or abandoned your telephone invention, with no intention of ever resuming it. What is the fact about that?

"[*Objected to as incompetent.*]

"*A.* I have never abandoned it, from the earliest time of working it; I have left it lay for a time, that I was compelled to work on other work, but never abandoned it.

"*Q.* 415. For how long a time did you ever let it lie, at any one time, without doing anything at it in the way of study, experiment, or the making or testing of instruments?

"*A.* I could hardly say how long I left it lie at one time; it might have been, may be, six months sometimes that I would not do any work on the machine, but I don't suppose there was a week but what I was engaged in the way of studying on it.

"*Q.* 416. Why were you compelled to let it lie at times and devote your attention to other work?

"*A.* I was compelled for the reason that I was poor. I had a large family to maintain.

"*Q.* 417. Was the maintenance of your family dependent upon your daily labor, or not?

"*A.* Yes, sir, it was."

"*Q.* 424. State whether your work in inventing the electric speaking telephone and in subsequently improving the instruments from the time of the original cup transmitter down to the year 1879 did or did not consume a great deal of time that would otherwise have been devoted to your daily labor for the support of your family.

"[*Objected to by Mr. Storrow as leading.*]

"*A.* It did.

"*Q.* 425. Did your devotion to this telephone work during that period (1867–1879) render it necessary to keep your family more closely, that is, more economically, than would otherwise have been the case, or not?

"[*Same objection.*]

"*A.* Yes, sir, it was necessary for me to economize; I was contracting debts which were demanded of me, and I was compelled to stop working on these machines to try and get clear of debt; I know that went very reluctantly with me, as I was anxious to work on these machines.

"*Q.* 426. Did that occur more than once or only once that you

were compelled to stop working on these machines and pay debts that were demanded of you?

"*A.* Yes, sir, often."

Part of the cross-examination was directed to showing that all this was entirely untrue, that his circumstances were such that he did not scruple to spend months and months experimenting with many contrivances which never brought him any profit, and never promised any. The fact is, that his circumstances were such that he could afford to spend months and months experimenting on anything he pleased if it was gratifying to his curiosity, or for his own entertainment. That he could do this is proved by the fact that he did do it; and this appears from his history.

On pp. 938–973 is the cross-examination about the electric clocks; and it apppeared from it that he must have spent a great deal of time and labor and a substantial amount of money in constructing electric clocks himself between 1869 and 1877, inclusive, before he formed the Clock Company. He made several experimental works, and finally, in 1876 and 1877, made four large finished clocks, three of them, at least, in handsomely carved black walnut cases, from four to eight feet high. He never sold any of them, though, in the spring of 1878, he contracted to sell one of them at $150; but the clock was not paid for, and was returned. All this was done on his own resources. It will be pretty hard to get the Court to believe that a man who could find the months and months of time to make these clocks, — three or four of them before he sold one, — can be the man of whom the story is to be believed that he never left the speaking telephone except to earn something by his daily labor for the support of his family, that he could find the means to construct all these clocks, but never could find the means to construct a few pairs of telephones for practical use or for sale, nor the $15 to file a caveat, or the $60 for a patent. His clock work is fully considered in the body of the brief.

But the clocks were only a part of his work. On p. 973 *et seq.*, he described other electrical apparatus which he made. He says, "I have been working on a good many things; I don't know whether I can tell of all." And then he went on through a number of pages and described the electric fire alarm; an old invention, but he made an apparatus. He made three galvanometers. The first

one he had made from what he had heard of elsewhere; afterwards he introduced changes; but he cannot tell whether they were of his invention or whether he saw them in books. Then he gives a very good description of the three galvanometers.

P. 986. He describes a dial telegraph working by magneto currents without a battery. It is a pretty elaborate piece of mechanism; never was used, never offered for use; he never saw any prospect of getting back the money he spent on it; he appears to have done it because he liked the entertainment. It consisted of both transmitter and receiver, and must have been a very expensive apparatus to build, if time and materials count for anything. His memory is as usual on this. He says (p. 988): —

"*X Q.* 1065. When did you construct this apparatus, and during how long a period were you experimenting with it?

"*A.* I don't remember when, and the length of time I was experimenting I don't remember."

He afterwards, in answer to more definite questions, said that it was before or after certain other events, the dates of which he does not remember. We proved by Mr. Pope that it was an old contrivance, and it has never been found a desirable one (complts, ii, 1383). Drawbaugh, as usual, swears that he invented it (p. 990): —

"*X Q.* 1074. Was the dial apparatus your own invention, — made without any knowledge of any similar apparatus?

"*A.* Yes, sir. When I made that I had never heard of anything, I am positive, — I mean anything of the kind."

He also made an autograph telegraph to transmit handwriting. It was a contrivance thirty years old, and known in all the books. Drawbaugh did considerable work on it, but never completed it. This he also claims as his invention, though he has to admit that he "afterwards" saw a description of it in a book. He did not remember when it was, — thought it was between 1867 and 1873 (p. 989): —

"*X Q.* 1072. Had you, before you constructed that apparatus, ever seen any account of an apparatus working on that principle?

"*A.* No, sir; I did not; but I did after that.

"*X Q.* 1073. Where did you see it after that?

"*A.* I don't remember whether I seen it in any publication or whether some person told me."

Then the cross-examination continued about his other work (p. 991): —

"*X Q.* 1085. Did you invent at one time a solar transit?

"*A.* No, sir; I did not invent a solar transit; I constructed a rude arrangement from some old camera lenses that I had there.

"*X Q.* 1086. When was that, and for what purpose did you construct it, and what use did you make out of it?

"*A.* The time that I constructed it I don't remember; I had used it at the time I was making one of those magnetic clocks, to regulate or test the clock as to proper timekeeping.

"*X Q.* 1087. Which one of the clocks?

"*A.* I don't remember which one; it was one of the earlier made clocks; it was before I made the clock Mr. Leonard had."

Drawbaugh also claims to have invented the speaking phonograph. He says that instrument C, having first been used for a telephone, was afterwards converted into a phonograph diaphragm, and of it he says (pp. 992, 993): —

P. 1091. "I constructed one; the time I don't remember, but was at a pretty early time; though when I constructed that I didn't make it a speaking phonograph; the first experiment I made I used the old instrument C; it was fit on the bed of an old turning lathe; it was truly planed off. Between that I put plaster-of-Paris, and when the plaster-of-Paris was of proper consistency I scraped it off level with the bed.

"At the bottom of the diaphragm of the instrument was a pin that would just come in contact with the plaster surface, and I would make sounds, — musical tones, and move the instrument while I was making the sounds."

He made a machine to insulate wire, first to run by hand and afterwards to run by a treadle (p. 994.)

In 1876 or 1877 he made a gear-cutting engine to cut wheels for his clocks.

All this, of course, was at the time when, according to his story, he did not cease a minute from his talking machine work except to earn bread for his family by his daily labor.

Pp. 978, 979. He made an apparatus for signalling and telegraphing; it was to ring at pleasure either one of several bells, and, in a modified form, was to be used as a Morse apparatus on a telegraph line. It was to work by a permanent magnet without any battery, and was in fact a magneto key. He made one, and, finding that not good, he made another. These are described at length, pp. 978 to 984. These are also referred to somewhat in the body of the brief,

where their dates are shown, and they have some value in fixing the dates of other matters.

It will be found from the testimony of others that he took these instruments to the telegraph offices at Mechanicsburg, tried them there, and afterwards took them to Harrisburg and showed them to A. R. Keifer and S. C. Wilson, the telegraph superintendents of the two railroads, and to others. (See D. A. Hauck, complts, i, 794; Lloyd, ib., ii, 1267; Keifer, ib., ii, 1280; S. C. Wilson, complts, iii, 2060, and pp. 426, 432, *infra*.) But there is not a pretence that he ever thought it worth while to take any alleged telephone to either of these persons or to anybody outside his shop to exhibit. We proved by Mr. Pope (complts, ii, 1382) that the magneto key and magneto signaller were old devices long ago known, not worth using, though, undoubtedly, the precise form in which Drawbaugh made it is different from that which had been theretofore used, and apparently is much inferior. The telegraph operator to whom he showed it said it was too cumbrous for use.

Drawbaugh, as usual, swears that he invented it (p. 990):—

"*X Q.* 1075. When you made your signalling apparatus had you ever heard of any magneto apparatus for transmitting?

"*Ans.* I never did before I made that."

These performances have great weight in the case. It is alleged that at this time he had operative electric speaking telephones, with which conversation could be carried on, and which were fit for commercial use. It is alleged that he never stopped work on them except at times when he was "compelled to work on other work" for the daily maintenance of his family. "I know that went very reluctantly with me, as I was anxious to work on these machines." (See defts, ii, 864-5, quoted fully p. 329, *supra*) Yet the actual positive fact is that to these other electrical contrivances, none of which, except the clock, ever did or ever promised to bring him a single cent, he devoted time, money and materials which would have sufficed to make fifty duplicate sets of any speaking telephone produced, or to pay for a patent half a dozen times over. The story of abject poverty and of assiduous devotion to the telephone which the defendants put into their answer, and which he wishes the Court to believe, is a falsehood.

Nor is that all. When he wanted to show electrical contrivances to men skilled in the art, — Lloyd the teacher, Zacharias, the Mechanicsburg operator, and Keifer and Wilson, the telegraph superintendents, — what he took to them was not a telephone, but a clock or a magneto key; and when in the summer of 1874 he advertised in print the contrivances which entitled him to be called inventor, he enumerated these in the largest type, and did not mention the telephone. This is his advertisement: —

Dan'l Drawbaugh,

INVENTOR OF

THE FOLLOWING PATENTS.

Stave, Heading & Shingle Cutter.
Barrel Machinery.
STAVE JOINTING MACHINE, Many in use.
Tram & Red-staff for leveling face of Millstone.
Rine and Driver for running Millstone.
Nail Machinery for Feeding Nail Plates.
PUMPS, ROTARAY & OTHERS.
Hydraulic Ram.
THE DRAWBAUGH Rotary Measureing Faucet. very extensivly used.
CARPET RAG LOOPER-- A little device by which rags are looped quick and firm. without Needle or Thread.
ELLECTRIC CLOCK.

MAGNETO ELECTRIC MACHINE,

For short line Telegraphing. Fire Alarm. and Propelling Electric Clocks. It can be applied to any form of Electric movement. Gives entire satisfaction USEING NO
GALVANIC BATTERY.
☞ For SIMPLICITY it has NO RIVAL

These are positive facts, — not denied. They did not dare to put Drawbaugh on the stand to give any reason why the Court, knowing them, should believe his story.

P. 991. "*X Q.* 1083. Did you ever consult Mr. Theophilus Weaver, of this city, in relation to any invention of yours relating to vibrating signs operated by electricity, or in relation to the Brush patents on electric light apparatus?

"*Ans.* I do not remember; he drawed up specifications for me on

other inventions, and I often asked him to make search for me on different inventions, but I don't now remember what.

"*X Q.* 1084. What inventions did he draw specifications for for you?

"*Ans.* For the magnetic clock and a measuring faucet; that is all that I can remember now."

He said that he had known Mr. Shapley a good while, and talked with him about inventions, but he did not remember what (p. 993–6).

He was then confronted (p. 996) with one of his printed bill-heads, which contained the following: —

Cumb Co, Pa. 18

Mr

BOUGHT OF DAN. DRAWBAUGH,

PRACTICAL MACHINIST,

Small Machinery. Patent Office Models, Electric Machines &c. a specialty.

They were printed by Holsinger while the latter lived at Eberly's Mills; and he moved away from there in November, 1876.

Then he describes the machinery which was in the shop at different times; but, although he held himself out as making the construction of electric machines a specialty, he is of opinion that he did not have proper mechanical tools nor materials to make them with. One gets out of patience with this fellow. To follow the defendants' answer, he has got to swear that he had not proper tools nor appliances; and yet he asserts that he made eight or ten perfectly operative telephones, three large magnetic clocks, a considerable number of other electrical instruments, and he advertised himself as making the construction of electrical instruments a specialty. And the moment he is pushed upon cross-examination, to reconcile these discrepancies, he follows his usual tactics and says, "I don't know; I don't remember; it may have been done, but I don't remember when, how or by whom," and so on, etc., etc., etc.

He then describes a number of other machines which he made: a counter for the revolutions of an engine, more particularly to count

bushels of grain weighed out; a gas governor, which he got up at his own expense, and offered to the Faucet Company; a stamp canceller, which he got up for Mr. Stees, his friend at Harrisburg, and for which Mr. Stees paid the expense, and about which Mr. Cameron was consulted. His friend, Simon Cameron Wilson, was the superintendent of telegraphs of Mr. Cameron's railroad, but neither Mr. Wilson nor Mr. Cameron was ever consulted about any telephone. He began to construct a machine for making paper bags; he says that he expected Singiser to furnish the means, and take half the patent for it, but he never got beyond an incomplete wooden contrivance; this was about 1876. He described a number of other things which he made at different times, largely of his own contrivance. He particularly refers to Mr. David Stevenson as a man who was connected with some of his inventions (p. 1008):—

"*X Q.* 1161. Did you ever get up and manufacture a syphon pump, or steam pump of any kind; if so, state what it is?

"*A.* Yes, I forgot about that; I got up a set of patterns for Mr. Stevenson, and I manufactured a few; I don't remember how many.

"*X Q.* 1162. When was it that you manufactured those steam pumps, and were they pumps of your own invention, or did they embrace any invention of yours?

"*A.* These that I manufactured for Stevenson, I don't remember the time; I manufactured some of them during the time that Mr. Chellis took charge of the shop; part of it was on a principle that I got up the model of one quite a number of years ago; I didn't call it a pump then, — a device for supplying steam boilers with water.

"*X Q.* 1163. Did you make any of those pumps for Mr. Stevenson before Mr. Chellis took hold of the business, and if so, how long before?

"*A.* Yes, sir; I don't remember how long; it might have been a year or two.

"*X Q.* 1164. Where does Mr. Stevenson reside, or carry on business, and how long have you been accustomed to deal with him in any way?

"*A.* He resides in Harrisburg; he has got a machine supply store there; I have been accustomed to deal with him quite a number of years; the old Faucet Company had some of their work made in his shop during the time that he run a shop here in Harrisburg; that was prior to the time that they run the shop that I am now in.

"*X Q.* 1165. What other dealings have you had with Mr. Stevenson since that time besides what related to pumps?

"*A.* I don't remember any particular dealings; I had manufac-

tured some small arrangements, that he termed a flue cleaner; I had made and changed some of the patterns on those machines for him, and he furnished the materials; he also furnished the materials for those syphon pumps; there may have been some other dealings; I don't remember."

Stevenson's relations were so intimate with him, and continued over so many years, even down to the time of suit, that if there had been telephones at the shop, Stevenson would have known of them; the defendants have employed Stevenson to assist in the preparation of the surrejoinder testimony, *but they did not call him as a witness.*

P. 1012. He refers to the hydraulic rams which he made with a certain alleged improvement of his own in the air chamber, and names persons who joined with him in making and selling them.

P. 1017. He was forced to describe the transactions between himself and Lee and Bayler, which have been referred to in connection with the deposition of Bayler, p. 47, *supra.*

P. 1025. He referred to instruments B and C, and compared the results which he obtained with his different instruments. This is fully stated in the brief in connection with the description of the defendants' instruments.

Pp. 1027–1029. He described the batteries he used.

P. 1030. He described how and when F and B became dismantled and went to the garret and never were repaired. Considering that a large part of his witnesses have pretended, falsely of course, that they heard them talked through after that, this testimony of Drawbaugh himself is pretty significant. His testimony is as follows (p. 1030): —

"*X Q.* 1260. How long is it since F and B have been in their present condition?

"*A.* It has been a good while, — quite a while, — a number of years.

"*X Q.* 1261. Jacob Hawn, one of the witnesses produced by the defendants, speaks of seeing F and B (p. 279) before May 27, 1872; and on page 282, in answer to Int. 40, he says he thinks the instruments were then in about the same condition that they are now: what is your recollection as to their being, prior to May, 1872, in the same condition that they are now?

"*A.* My idea has been that they might have been in a condition that they could be worked; I ain't sure; the instruments at one time, I know, after I had quit using them, had been carried to the

garret, or loft, of the shop; we then brought them down again, after wards; they had been in a condition to work, until the mice had eaten the membrane out of the tin can B; I don't know exactly what time that was.

"*X Q.* 1262. About what time was it, to the best of your recollection, when the instruments F and B were carried to the garret, or loft?

"*A.* That was about the time that I had made C, or after that; I should suppose, about 1872, 3 or 4; somewheres about that time; they were brought down again afterwards, for I know, even later than that, I showed them in connection with other apparatus.

"*X Q.* 1263. When were they brought down?

"*A.* That was some time after they were taken up; I don't remember what years.

"*X Q.* 1264. To the best of your recollection, how long after they were carried up was it before they were brought down?

"*A.* They might have been up six months, perhaps less, or perhaps more; I don't know.

"*X Q.* 1265. What was the occasion of their being brought down?

"*A.* It might have been that I wanted to show them to some parties, as I know I did show them; that I wanted to show them how the first construction of the instrument was; that instrument may have been with some other ones, — may have been taken on the garret several times; I think so; I think it was taken back and forward several times.

"*X Q.* 1266. You said that they were carried into the garret after you had quit using them, and you spoke of the membrane as being destroyed by the mice; did you ever fit them up again for use after you first quit using them?

"*A.* I don't remember that I did; I remember of making changes of different membranes on that instrument, and on other instruments.

"*X Q.* 1267. Were those changes made while you were using them, or after you had quit using them?

"*A.* The changes were made while I was using them — trying different kinds of membrane."

For purposes of test, the defendants did not offer F, the instrument their witnesses swore to, nor any reproduction of F. On the contrary, the instrument falsely called "F reproduced" differed much from F. Mr. Pope (complts, ii, 1303, 1348, 1371–6) has pointed out the differences, and the improvements each introduced, and their value and importance. "F reproduced" has a metal diaphragm, instead of a bladder diaphragm; and, even with that and an improved adjustment, and a better mouthpiece and a more rigid support, it was

almost impossible to obtain an adjustment good enough or maintain it long enough to transmit two consecutive words. The following testimony from Drawbaugh shows why the defendants did not choose to offer a true reproduction of even what their witnesses had described as F; and this fact, in connection with their entire failure in New York, is a confession that the instrument F, with a bladder and otherwise constructed as sworn to, could not be submitted to test without results fatal to them. Drawbaugh testified (p. 1032): —

"*X Q.* 1275. You spoke of using, at one time, a tin plate instead of membranes, on instrument F: when was that?

"*A.* *I couldn't tell the period*, either, but that was some of the later experiments; that is, it might have been about the time that I made C, or earlier; my recollection is not very good; anything that I can remember distinctly I will state.

"*X Q.* 1276. Which did you find the best on F, the membrane or the tin plate?

"*A.* *The tin plate, because that would not require so much adjusting — so frequent adjusting.*

"*X Q.* 1277. After you had tried the tin plate and found it better, did you use membrane on F?

"*A.* I don't remember that I did, after that; I would suppose I did not.

"*X Q.* 1278. Did you use a tin plate on F when you were using B with it?

"*A.* I don't know; I don't remember that I did; I might have, but I ain't positive."

Now as the witnesses swear to a bladder on F, and to the use of B with it, on the very last occasions when its use is mentioned by any one, and as late as 1875, according to their story, and as 1877, according to the complainants' witnesses, the metallic diaphragm is pushed over to a very late date, even if all their depositions are to be taken at their face value. It was reserved for the cross-examination to develop these facts.

In many ways the instrument called "F reproduced" falsifies the original, of which it pretends to be a copy. One of the great troubles with this instrument, "F reproduced," in the practical tests in New York, was that it was almost impossible, with the utmost skill and under the most favorable circumstances, to obtain or afterwards to maintain an adjustment good enough or enduring enough to get through even two or three words. The very act of speaking to it threw it out of order, so delicate was the adjustment required, and

so imperfect the means of obtaining and maintaining it. In this respect the instrument "F reproduced" was far better than F. F has a single, bent rod passing through a hole in the thin cap piece, with a single adjusting screw at the top; such an instrument could not be touched or breathed against without throwing it out of order. "F reproduced," on the other hand, has a stirrup formed of two rods, the two supporting points being the whole width of the tumbler apart, with an adjusting screw on each.

It was not, and the Court will not believe that it was, by accident, that the better form was adopted for the instrument to be tried. When did Drawbaugh devise the latter form which alone makes a word or two possible, if he ever devised it? Not a single witness out of their five hundred and fifty refers to the double-rod contrivance; on the contrary, they all swear to F, *as that instrument was presented to them.* F never could have had a double-rod contrivance, for there is only one hole in the cap piece through which a rod could pass; the other hole is put in in a very slanting direction, for the conducting wire which it would accommodate, but a perpendicular rod could not pass through it; that is absolutely certain. Now Drawbaugh nowhere states when this double-rod arrangement was made or used. In his direct examination he said first that it was not until after he had used the single rod; then he said that it was not until after 1871, and finally, on cross-examination, he distinctly admitted that after he had once made it he never used the single rod again. What becomes of his story, therefore, when every witness whom he produced saw a single-rod arrangement and swore to the identical cap piece of the instrument produced, and never saw the other? Drawbaugh's testimony on this point is as follows: —

P. 798. "*Q.* 114. Please look at Exhibit Reproduced F Drawing, and state whether it does or does not correctly represent the tumbler instrument as you used it at any time.

"*A.* Yes, sir; it represents the tumbler instrument as used at a time — not exactly the original — not the arrangement that the original instrument had.

"*Q.* 115. In what respect does it differ from the original instrument F as first used by you?

"*A.* It differs in this respect: in the reproduction, I used a yoke, represented in the drawing of the reproduction, F F, the original having only one post or bar or rod, instead of a yoke, as

shown in Exhibit F Drawing there were modifications. The mouthpiece of the original was large — with a large opening, like that on Exhibit F; I had made different mouthpieces — modified them — made them of different shapes. I can't give the different modifications; the first ones were much larger and higher — higher from the diaphragm."

P. 906. "*Q.* 656. How does Exhibit Reproduced F Instrument compare with the old tumbler instrument as the latter existed prior to 1871, when you used it in connection with instrument C?

"*A.* It compares exactly, with the exception of a modification. I had it in two forms; that is, in one I had two metal posts, or a continued stirrup, and in another I had one, as represented partly in Exhibit F Drawing; it compares in every other respect.

"*Q.* 657. Am I to understand you that it is an accurate reproduction of one of the two original modifications or forms?

"*A.* Yes, sir."

P. 1034. "*X. Q.* 1288. When you came to use the instrument F, you had, as I understand you, two forms, — one where the lower plate was connected to a single rod, as in the instrument which is now produced, and another where it was used with a stirrup, as shown in reproduced F: which of those two forms did you use first?

"*A.* The form with the one rod; I could not say how long; I don't remember.

"*X Q.* 1289. After you adopted the second form, did you use the first form again?

"*A.* I don't remember that I did; it may be that I did; there was a number of tops or mouthpieces; I may have left them attached; I don't remember.

P. 1033 *et seq.* He described various low conductors which he said he used, — carbons and other powders, — and the way in which he used them: —

"*X Q.* 1281. In answer to Int. 61, you mentioned several materials which you used for a low conductor, in this cup instrument, such as clean fine earth, and earth used in combination with plumbago, plumbago alone, and pulverized charcoal: which of these substances did you find the best?

"*A.* I don't remember exactly; I think the carbon was the best; that is, the charcoal.

"*X Q.* 1282. When you used plumbago, did you use commercial plumbago — pulverized plumbago, such as is bought?

"*A.* It was plumbago; I got it in lumps, rather, and pulverized it.

"*X Q.* 1283. You spoke in answer to Int. 62 of using also in that instrument finely divided metals: did you refer to bronze?

"*A.* Yes, sir; I had used it in combination with the other low conductors too.

"*X Q.* 1284. Can you give me an idea how finely you pulverized the charcoal, bronze and plumbago as compared with that commercial bronze?

"*A.* I can't just remember how finely; I pulverized it in a mortar, and made it as fine as I thought would be practical.

"*X Q.* 1285. Do you think you made those substances as fine as bronze?

"*A.* I don't know; they might not have been as fine as bronze; though there is different degrees of fineness of bronze.

"*X Q.* 1286. Did your experiments lead you to give a preference to one of those substances over the other, in your future use of the instruments?

"*A.* I did, yes; that is, in charcoal.

"*X Q.* 1287. How much better did you find charcoal to be than either plumbago or bronze?

"*A.* I don't remember, because I had them in combination, different ways; but I think charcoal was the best, as near as I can remember; that is, I am speaking of the cup instrument; I will state that I may have used coke in that instrument; I don't remember; in making them statements there, I spoke to the best of my recollection."

Then the interesting discovery was made, that at least one set, and, apparently, two sets, of instruments were — not abandoned, of course; because Drawbaugh said that he never abandoned — but simply thrown into the garret and destroyed. So the defence that rests upon his alleged early instruments is a scrap-heap defence after all (p. 1030): —

"*X Q.* 1261. Jacob Hawn, one of the witnesses produced by the defendants, speaks of seeing F and B (p. 279) before May 27, 1872, and on p. 282, in answer to Int. 40, he says he thinks the instruments were then in about the same condition that they are now. What is your recollection as to their being, prior to May, 1872, in the same condition that they are now?

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"*A.* I don't remember that I did; I remember of making changes of different membranes on that insrument, and on other instruments.

"X *Q.* 1267. Were those changes made while you were using them, or after you had quit using them?

"*A.* The changes were made while I was using them, — trying different kinds of membrane."

P. 1040. "X *Q.* 1325. Do you remember making any change in the electro-magnets of instrument B after you first carried it into the attic?

"*A.* I don't remember; I may have; it was carried to the attic more than one time; I don't remember when it was first carried to the attic."

"X *Q.* 1339. Was this instrument at any time carried into the attic, like B and F?

"[*Objected to by Mr. Hill, as assuming that F was carried into the attic.*]

"*A.* Not that I remember of.

"X *Q.* 1340. Was F carried into the attic at any time?

"*A* I don't remember that F was; it may have been.

"X *Q.* 1341. Where was instrument C kept, and instrument F, after C was made and used with a transmitter?

"*A.* Different places, that I had tried them in; it was generally in a small room on bench under the desk, and sometimes in the desk

—different places; and it may have been placed on shelves that were in that room — two or three shelves that were fastened to the staircase that went up to the attic.

"X *Q.* 1342. Do you mean the small room that has been spoken of as the private office?

"*A.* Yes, sir; the small room at the northeast corner of the shop; but it may have been kept at other places in the shop; I don't remember; it was moved to different places in the shop.

"X *Q.* 1343. My previous question also inquired where F was kept after C was used as a transmitter?

"*A.* I would have to make about the same answer; it was kept about the same places — different places.

"X *Q.* 1344. Do you mean that these two instruments F and C were kept in the place you have described down to the time you first showed these instruments to Mr. Chellis and Mr. Hill?

"*A.* To the best of my recollection; though, as I said in the other answer that I made, the instrument C might have been taken to the garret; I can't remember all the different places.

"X *Q.* 1345. What makes you think it may have been carried to the attic; have you any recollection of its being carried there?

"*A.* No, I don't have; but I have been in the habit of carrying some of my apparatus there when not using them."

He then made some references to the various instruments and the comparative results obtained with each, and which he used together to make a pair. This has been already referred to in the body of the brief.

P. 1047. He speaks of bringing instruments over to Harrisburg to show Mr. Stees. He was asked whether it was not A that he brought over; he says he was under the impression that it was D and E, but does not seem to be sure. Is not sure whether he carried the instruments at some time to the office of the Western Union Telegraph Company; it was proved by the complainants' witnesses, Zeigler and Wert, that he did, and that this was in the late spring or early summer of 1878; and that A was what he carried there. (See pp. 407 *infra.*)

Pp. 1048 and 1049. He says that in the summer of 1876 he heard that some one had got up a telephone and had it on exhibition at the Centennial, but he does not remember the name which he heard in connection with it, nor where he got the information. Then he describes (p. 1047) the visit to Stees's office in Harrisburg, where he saw the Phelps snuff-box telephone, proved by the officers of the

company and by the contemporaneous newspaper publications (of March 18, 1878) mentioning the telephone at Stees's office to have been in the early part of 1878. He afterwards saw the Crown instrument (p. 1050). The Phelps Crown instrument was in use in the first half of 1878 also, but not afterwards.

P. 1052. He says that he tried his telephone over a wire fence, insulating the wires on the fence for that purpose. He does not remember to have tried to get speech through it at all, but merely the ticking of a clock.

P. 1054. He describes testing some of his instruments with the galvanometer.

P. 1055. He testifies some more about the rams he put in.

Pp. 1056 and 1057. He testifies some more about the clocks that were made.

P. 1058. He was forced to contradict Abraham Fisher as to the time when Abraham Fisher's ram was put in, for which see the deposition of Abraham Fisher, pp. 233, 234, *supra*.

P. 1060. Admits that he made an affidavit about the alleged invention of the telephone for the defendants. He was asked to produce it, whereupon the defendants' counsel interfered and insisted that it should not be produced. The defendants were then called upon to produce it, and they refused. We submit that this refusal should have weight with the Court. Drawbaugh was put upon the stand when the controversy was eighteen months old, and after all the other witnesses had testified. His affidavit was made about the 1st of July, 1880; it would be, to say the least, interesting, and, if the story be true, certainly harmless for the defendants, to find out what the story was which Drawbaugh told of his own memory, with such assistance as he could then have, in the early part of this controversy, and compare that with what the story has grown to after eighteen months of preparation. Considering how much depends on Drawbaugh's testimony, and the relation he bears to the case, that he is an interested party and a very large stockholder, we submit that the Court was entitled to have that earlier story laid before it, so that we could cross-examine Drawbaugh about it. Of course it would not be evidence in favor of the defendants, but it would have a bearing on his veracity. We submit

that the Court, from the refusal to produce it, should draw the inference that the story has grown in the mean time.

In the answer the defendants asserted that they had caused an application to be made in the Patent Office, and in their direct examination of Drawbaugh they had him swear to the fact that he had made an application. We referred to this on p. 1061 of the cross-examination, and on p. 1071 asked him to produce the copy of that application. We wanted it for the same reasons indicated with reference to the affidavit. They refused to produce it (see p. 1071).

P. 1068. He produced some bills for pipe purchased to put in the rams he had furnished; among them is the bill of the pipe for the Draper-Kissinger ram at Marysville.

The depositions of himself and others in the Faucet interference case were put into his hands, and he was asked to read them and state whether he found any occasion to modify or explain any part of them. He does so, and says, as to his own deposition (p. 1070, ans. 1497), "I don't find there anything to modify; it was given to the best of my recollection at that time." It was then put in evidence. His own statements made at that time under oath of course are competent. The whole of that interference is competent, at least to this extent; it is difficult to understand that a man who had made and invented a speaking telephone in 1867, and who, from that time until 1880, had thought of little else and devoted his whole attention and time to it, should in 1879 enlist the aid of his friends and spend a good part of a year taking testimony about a molasses faucet, should, in the course of that testimony, need to account for the fact that the faucet invented as he said in 1879 was not sent to the Patent Office until 1879, and should not, in attempting to account for that delay, make any reference to his intense application and absorption in the speaking telephone, if such were the fact; *and yet there is no trace of anything of that kind in the testimony.* There are indeed references to the telephone in his deposition as follows (complts, iv, exhibits, p. 100):—

"*Q.* 69. Will you produce any other sketches?

"*A.* Here is a sketch that I made about the time that I was experimenting on telephones or phonographs,—about 1874 to 1876.

"*Q.* 70. To the best of your knowledge, when was that sketch made?

"*A.* About 1876; it might have been made before.

"*Q.* 71. Was it made later than 1876?

"*A.* To the best of my knowledge, I don't think it was. [*Book marked G put in evidence.*]"

P. 150. "X *Q.* 151. [*Sketch and book G handed witness.*] Give us, if you can, the exact date, or an approximation of it, when that sketch was made.

"*A.* That might have been made three, four or five years ago — I go by the nature of the drawings — I mean the telephone drawing and the old plan of faucet; I was working on the telephone about [that] time."

He was then cross-examined about the visit of Mr. James P. Matthews and the article of Mr. Matthews (pp. 1075, 1078); for this see deposition of Matthews, p. 371, *infra*. He was cross-examined about the visit of Clarence Rockafellow (p. 1079), for which see p. 370, *infra*. He was cross-examined about the visit of Mr. Jacob Grissinger and of Henry M. Watts (p. 1081), for which see p. 425, *infra;* about the visit of Lloyd and Worley (p. 1082), for which see p. 366, *infra*.

The various publications about his clocks were put into his hands, and he said that he knew of them at the time; he stated that he did not remember any others, though he would not say there were not any. We had the newspapers searched by a careful clerk, who testified that there were no others, and that, with Mr. Drawbaugh's admission that he did not know of any others and the fact that the defendants have not pointed out any others, is enough. He says in terms that he has no recollection of seeing any others.

P. 1036. He says that the file wrappers shown him are the file wrappers of the patents which have been granted to him. In our rejoinder testimony, p. 1916, we introduced also a certificate from the Patent Office, to the effect that no patents had been granted to Drawbaugh prior to the institution of this suit except those named in it. This is important in connection with his advertising card, in which "patents" means "inventions."

He then (p. 1087) described and made some references to the manner in which the defendant corporation had acquired its interest and the price it paid him, but he declined to state how much stock he received. He received $20,000 in cash, which he shared with his three associates, — Mr. Hill and Mr. Jacobs his counsel, and Mr. Chellis of Harrisburg.

On the redirect examination, p. 1088, he produced from his old papers a copy of the Patent Office rules and Munn & Co.'s circular, but he does not know when he received them. The only importance of these is to show that he was long familiar with the Patent Office proceedings, at any rate to the extent of knowing the way to the office and the importance of patenting an invention. His own dozen patents, however, and the fact that he advertised himself as an "Inventor, Designer and Solicitor of Patents" are enough for that purpose.

He testified, p. 1093, that he thought that he had made phonographic experiments in 1875.

P. 1094. He had known of the Reis telephone, and got his knowledge of it from Mr. Shapley while he lived at Mechanicsburg. Shapley gave him a copy of the *Scientific American* which had an illustration and description of it. His testimony about this is as follows (p. 1094): —

"*Q.* 1603. There was a machine made at Paris, France, as early as 1864, and in Germany before that time, and well known in France and Germany, that is known as the Reis telephone, from the name of its inventor: had you ever known of that machine prior to Mr. Matthews's visit to your shop, early in 1878?

"*A.* I think I had; I got a knowledge of that machine from Mr. Shapley, at Mechanicsburg, during the time I lived in Mechanicsburg; he gave me a copy of the *Scientific American* that had an illustration and a description of it in, and told me *that was something of the nature of the machine I was working at then;* I think the paper may be in my shop somewheres yet.

"*Q.* 1604. What did you understand to be the character and mode of operation of that Reis telephone?

"*A.* It was representing as transmitting musical sounds or tones by means of electricity.

"*Q.* 1605. Did you understand it to be an instrument operated by a continuous circuit, or by a make-and-break circuit?

"*A.* By a make and break.

"*Q.* 1606. Did you examine the description and illustration sufficiently to thoroughly understand the construction and mode of operation of the instrument?

"*A.* Yes, sir; I did.

"*Q.* 1607. Did you, at the the time, regard it as an instrument capable of transmitting vocal speech between distant points so it could be understood?

"*A.* I did not; it wasn't represented either to be that."

At our request he produced the paper, and it turned out to be Dr. Van der Weyde's article in the *Scientific American*, March 4, 1876. This will be referred to more particularly in connection with the deposition of Mr. Shapley, p. 417, *infra*. Drawbaugh said (p. 1101) : —

"*Q.* 1659. When Mr. Shapley showed you the copy of the *Scientific American* with the illustration and description of the Reis telephone, do you remember how long it was after the article was published, or after the date of the newspaper?

"*A.* I don't remember how long, but my impression was that it was not very long, though it might have been six months; I ain't positive as to the length of time.

"*Q.* 1660. Have you and Mr. Shapley been on friendly terms since the Clock Company was started?

"*A.* When we meet we speak, but I don't think he thinks as much of me as he did at one time; by his manner when we meet I would think he didn't think very much of me."

P. 1095. The defendants' counsel put to him some questions, which are useful as showing the defendants' assertion of date. They are as follows : —

"*Q.* 1611. The little magneto machines D and E, *if I understand you and other witnesses*, were made about the time when the Axle Company commenced operations; they were not, if I understand you correctly, the first magneto telephones that you had made?"

He says that in Harrisburg he has tried the commercial telephones connected with the telephone exchange (p. 1096) : —

"*Q.* 1622. When first?

"*A.* I don't know; I could hardly give the year, — it was about 1878 or 1879; it may be before.

"*Q.* 1623. Where?

"*A.* At Mr. Stees's lumber office, at the lower end of the city, and I think at the Western Union Telegraph Office at the time they had a small office outside, — a temporary building in the yard. Mr. Clute gave me the instrument, and some person at a distance spoke. I could not understand, and he took the instrument. The instrument then used was the oval instrument, — I think it was the Phelps instrument."

"*Q.* 1625. I understand you that you could not hear through the Phelps instrument: why was that, — for want of loudness or clearness? I refer to the time when you tried it at the Western Union Office.

"*A.* For want of loudness. I heard some words, but not whole sentences. I didn't understand the subject the man was speaking upon.

"*Q.* 1626. Could you hear and understand through the instrument at Mr. Stees's office when you tried it?

"*A.* I did some, yes."

As to the telephones which he saw in Harrisburg, he adds (p. 1101):—

"*Q.* 1662. When you saw the Edison, Phelps, Bell or other telephones here in Harrisburg, did you open them to see what the internal construction was?

"*A.* No, sir; I did not."

He is effectually contradicted on that by the complainants' witnesses, Wert and Ziegler, who testified that the Phelps snuff-box was shown to him, and that he actually borrowed the Phelps crown instrument and took it to his shop for several weeks. This must be taken as true, because the defendants did not dare to put Drawbaugh on the stand to contradict it.

The burden of his direct examination and of the direct examination of a hundred witnesses had been that he never left the telephone except when compelled to some gainful labor for the support of his family, and then with reluctance. But his cross-examination showed the months and months that he did spend, and therefore could afford to spend, in experiments on other contrivances (see p. 330, *supra*). The pretences of his direct examination were destroyed; the defendants felt it, and, with that lack of the sense of the ludicrous which characterizes many parts of their testimony, they tried to crawfish out of their discomfiture. Not being able to find $15 to file a caveat with for his telephone, he set to work to invent and construct an improved molasses faucet and three or four large magnetic clocks, one of them seven feet high, to the end that he might patent them, and by selling those patents, get money enough to patent the telephone. He testified (defts, ii, 1114):—

"*Q.* 1739. You have testified, in effect, that after unsuccessful efforts to induce different people to take a half interest in your telephone invention and furnish the money for procuring patents and introducing it into public use, you expected other parties to go into the manufacture of the magnetic clocks and to go into the manu-

facture of the improved faucets. What was your object in embarking upon the clock business and the faucet business in 1878 and 1879?

"*A.* My object was this, that I was pretty poor; I was anxious to get some party to take an interest in and run that business, to make some money by it. I was anxious also to make a raise, to have money to secure my telephone improvements; I know that I often desired to have made arrangements — get a job — that I could make some money for that purpose."

Then comes a curious question, showing the state of his memory upon matters of less than five years ago (p. 1098): —

"*Q.* 1630. You moved back from Mechanicsburg about the first of April, 1877, and the Electric Clock Company commenced business in the spring of 1878: during that one year, from the time when you moved back from Mechanicsburg till the time when the Electric Clock Company commenced business, to what extent were you working on your telephones?

"*A.* As near as I remember, I was working on them; the extent I can't exactly say, but I was working on them, I know; I think that, during that time, I was experimenting on different kinds of diaphragms; that is, on the cone; I had a temporary cone put up against the wall of the shop, or against the cupboard of the shop; I am pretty positive that was one of the experiments that I had during that time; there may be others that I don't remember; very likely there were; I might state here, that, while I was experimenting on that, I made quite a number of cones of different shapes, and tried them; but some of these experiments may have been after 1878, too; but I got up a complete cone instrument between 1878 and 1880, or between 1879 and 1880; it is sufficient to say it was the cone instrument.

"*Q.* 1631. Did your experiments on telephones run through the year 1877, or were they confined to any particular part of that year?

"*A.* *I don't remember;* whenever I had time, I would work on them; I know I worked very often at night on them, and late at night, particularly if I had any work to do in the daytime."

The Court will observe that this cone instrument was fastened against the wall or against the cupboard. No other instrument is spoken of by him as so fastened, and no instrument produced is capable of being so fastened except the microphone transmitter H. This cone instrument was not made until about 1878. He does not say whether it was a transmitter or receiver, or both. The importance of this is that a number of witnesses who speak of an instrument

fastened to the wall or the cupboard before 1876 either saw a string telephone or are mistaken in their date.

He had testified that the money which he got from the Faucet Company was partly used in paying old debts (p. 876). P. 1117, he was asked what debts. He could not remember very well; the only parties he could name were Zacharias and Graybill and Natcher. We proved that he had no dealings with Zacharias and Graybill or Natcher until long after the time when he received the faucet money, and that the extent of his dealings with Natcher for cash was less than $6.00. He undertook to account for a thousand dollars in this way. On redirect examination the defendants, by a leading question, tried to get him to say that part of that alleged thousand dollars of payments was made to one John K. Taylor; and the best that they could get out of Drawbaugh was (ans. 1759, p. 1119): "I don't remember; it may have been; I can't remember the different payments."

And so his last answer repeated the burden of his whole deposition, — "*I don't remember; it may have been.*"

COMPLAINANTS' PROOFS IN REPLY.

The complainants have directed their evidence in reply relating to Drawbaugh (complts, i; complts, ii; complts, iv, exhibits) to certain principal and controlling points.

The history of the claimant disproves his claims. By the cross-examination of the claimant, Drawbaugh, and by certain records introduced through or in connection with the defendants' witnesses, a considerable number of the actual facts of the claimant's history were brought to light. The complainants, in their proofs in reply, have aimed to complete this history by showing other facts in the claimant's career, and by showing them, by record proof or other evidence, equally incontestable. They have meant to lay before the Court, so far as a stranger could ascertain them, the absolute facts of his life during the period under examination, to prove them by documentary evidence, or by other proof not open to the possibility of mistake or misrecollection, and to cast upon the defendants the burden of answering the inquiries to which these facts gave rise, or of confessing by silence their inability to answer them. The history thus proved consists of a series of ultimate facts, perfectly unassailable, and upon which the Court can rely with entire safety. Everything in the case resting on mere oral testimony must conform to these and be consistent with them, or be broken by them.

The complainants have produced a large amount of documentary evidence about Drawbaugh's history. Among this is a list of his inventions, printed and published by him in 1874, and a list of his inventions "which had been perfected and worked satisfactorily," sworn to by him in 1879. Neither list enumerated the telephone.

The defendants have produced many witnesses who swear that they heard of telephones, or saw them, and in some cases heard speech through them at Drawbaugh's shop, at very early dates. This testimony cannot be reconciled with our proofs, and it all rests upon mere efforts of memory. It is specifically and conclusively proved that much of it is false; the described visits of the witnesses to the

shop, sworn to as before our patent, turn out in many cases to have been after it; the instruments with which they say speech was transmitted are proved by actual tests to have been incapable of doing it. The present so-called recollection is in many cases specifically proved to be merely the result of recent gossip and of stuffing the witness with stories, — and all this in so many instances as to show that no reliance can be placed on these depositions. It will perhaps never be known with absolute certainty to what all the defendants' depositions are due, but, considering the character of their witnesses as thus shown, many things far short of a practically operative electric speaking telephone would account for it. But if such an instrument had existed before 1876, the evidence, oral and *documentary*, produced by the complainants would have been impossible.

No telephone was known in Drawbaugh's shop before 1876. The story which the defendants assert is, that Drawbaugh had practical speaking telephones from 1867 or 1868 down to the time of this suit, and that the existence of such instruments in his shop was known to everybody in a widely extended community. They allege general knowledge of them in the most effusive terms; yet their language is not stronger than the case requires. For such an apparatus needs at least two persons to use it; a man who had made the invention and constructed a practical apparatus would be so possessed by the intellectual interest as well as the commercial value of his achievement that he would be absorbed in it, and his life and conduct would be controlled by it; the invention is of so striking a character that even the attempt to make it would attract great attention. A restricted story, covering many years, would be on its face a false story.

We have already called attention to the fact, admitted by them, that no one ever sought for his instruments, that no one ever learned from him how to transmit speech, and that he never used them himself, unless for mere experiment in his own shop, and we have shown that *these positive facts*, and other admitted or proved facts of his history, are so inconsistent with the existence of practical instruments through a long series of years as to be positive and decisive proof that none such existed or were believed to exist. (See body of this brief and pp 6, 281, *supra*.)

We are now, however, concerned with the depositions which bear upon the specific question of any knowledge, either general or limited.

To meet the defendants' allegations in this respect, the complainants have called a very large number of the most prominent men of the neighborhood, who prove that they had no knowledge of the alleged instrument or invention until after the date of Mr. Bell's patent. A considerable amount of this proof is found indeed in the defendants' own record. Thus the defence called Samuel F. Hertzler, William R. Gorgas, William Luther Gorgas, George Leonard, Ezra Gilbert, John G. Heck, Amos Frownfeldter, Alfred Ditlow, and others, — men who, for many years, were Drawbaugh's immediate neighbors, and so situated with relation to him that they must have known of his alleged invention if it existed. Three of those men, Hertzler, Gorgas, Sr., and Gorgas, Jr., father and son, were partners of Drawbaugh for a number of years in the Faucet Company, of which W. L. Gorgas was the superintendent and W. R. Gorgas the treasurer.

There have been thus brought before the Court about sixty witnesses, whose position and whose relations to Drawbaugh during the years involved in this inquiry were such that, if he had made the invention, and had, as the answer alleges, "fully communicated it to the public," or even to his neighbors and the people of his village, or had possessed practical speaking telephones in his shop, and used them, even experimentally, before Mr. Bell had made the apparatus common, they would have known of it. A man who knew of so startling a thing in the hands of his friend before it was known elsewhere could not forget it. And among these sixty witnesses are most of the men of intelligence and good standing in his neighborhood. Among them are men of means, who helped him in other enterprises and lent him money. They have pointed out others, now living and accessible, who must also have known of it if it existed, and who, from the defendants' failure to call them, must be presumed to be ignorant of it.

The value of the testimony of these men does not depend upon their mere oath upon the stand that they knew nothing of it. Many of them are witnesses called by the defendants themselves upon collat

eral matters. More than half of them had been visited and talked to by the defendants before we knew of them; many of them have since been visited and urged to come back and deny their former testimony — a severe test when applied by an interested claimant to old personal friends; and so the defendants cannot impeach their fitness to be witnesses, nor suggest that their attention has not been called to the subject in such a way as to awaken their friendly recollections to the utmost. They were men who would have known of it from the claimant himself if he had had such a thing to tell. They were cross-examined at length, *with the assistance of the claimant*, and if there had been a single instance in which he had shown telephones, or otherwise disclosed the alleged invention to them, their attention would have been called to such specific occasion, and a memory of it aroused. *This was not done in a single case. No question stating a particular occasion was put in a single such witness. Drawbaugh did not venture to go on the stand after they had testified.* It is a fact, therefore, that he never disclosed the invention to these men.

Prominent among these witnesses are two telegraph superintendents (A. R. Keifer and Simon Cameron Wilson of Harrisburg), to whom he was in the habit of talking about electrical matters during the period under inquiry, and to whom he showed other electrical contrivances, but never mentioned a telephone, a patent solicitor (Theophilus Weaver of Harrisburg), whom he repeatedly talked with about inventions, etc., some members of the Drawbaugh Manufacturing Company, a corporation which, from 1869 to 1872 or 1873, was seeking some invention of his on which to employ their machinery and capital, and various other men of means and enterprise. If such an invention had been disclosed to any of those men, the claimant's history could not have been what it has been: the invention once known to any of them would have made its mark,—would have been put to use and been patented. It is, therefore, an absolute positive fact that the alleged invention never was known to these men. And they could not have helped knowing of it if he had anything which he thought worth talking about.

Yet his story is that during all these years he had practical in-

struments, was fully persuaded of the money value of the invention, and strove to make it known freely to every one.

Twenty years before Mr. Bell's patent a number of men had tried to make speaking telephones and failed because they had not hit upon the true method which Mr. Bell was the first to discover. Such men count for nothing among inventors. After Mr. Bell's invention had gone into extensive use Drawbaugh, in the spring of 1878, declared that he had tried to make a speaking telephone at some unnamed early date but had failed, and knew that he had no claim to be considered the inventor. These statements are evidenced not merely by the recollection of witnesses but by contemporaneous published writings. Among them is a list of his inventions published by him in 1872, and a list of his inventions which had been "perfected and worked satisfactorily" sworn to by him in 1879; neither list mentions the telephone.

Poverty. What does poverty mean, and why is it here invoked? If poverty prevented him from reaching practical success it cannot help the defence, for if he did not come to the point the law requires, the reasons for his failure are not material. The poverty which they must allege and prove, if such an issue has any weight, must be a poverty which did not prevent him from devoting years to the work, which did not prevent him from making a dozen highly finished instruments, but which, allowing all this, and permitting the completion of the invention, cut him off from filing a caveat or an application for a patent, — a poverty which gave him the leisure and the means for years of experimental work and the production of certain sets of alleged operative instruments, but would not suffer him to work one week more in making a few duplicates for sale. Now such a condition of things cannot be stated or believed; it is not credible nor thinkable. The strongest that the evidence offers in his favor is the statement which he made to Mr. Matthews in 1878, and which Mr. Matthews printed, — a statement by Drawbaugh in his own favor, long after Bell's success was assured, — that "nothing but his poverty *prevented* him from conducting his experiments to a successful issue." Admitting that as evidence for him, it states him out of the case, for it states in law at the most just what Mr. Matthews published in Drawbaugh's highest claim: "This unlettered country mechanic

came very near anticipating Edison and Bell in the invention of the telephone."

Now, knowing what kind of poverty he must prove, let us rehearse the proof.

The claimant's means and resources. It was intimated in the defendants' answer and in the direct testimony of some of the defendants' witnesses, that Drawbaugh lived in a secluded and poverty-stricken neighborhood, from which no money could be furnished, even for such an invention as the speaking telephone. Admitting that he never practically used nor offered to any one for use a single instrument, and that he never filed an application nor a caveat, they have sought to account for this by the allegation that during nine years he could not raise the few dollars needed for it. The complainants have proved that this is untrue, both as regards the claimant and as regards his friends and neighbors. They have shown the wealth of the community, a considerable number of the farmers within half a mile of Drawbaugh's house being worth from $50,000 to $90,000 each, the farms worth from $150 to $250 an acre; the community though in part uneducated, yet as a whole "prosperous, forehanded and enterprising." To none of these named men of his vicinage, connected with him, all by ties of friendship and old acquaintance, and many of them by tolerably intimate business relations, did Drawbaugh ever apply for any assistance for his alleged telephone, nor are any of them called by the defendants to prove knowledge of it. Such of them as have been brought before the Court by the defendants have not been interrogated about it, which, of course, is an admission that if asked their answers would be unfavorable to the defendants. A number of them, brought before the Court by the complainants, testify positively that they never knew of the alleged instrument, and that if Drawbaugh had had a practical speaking telephone he would have had no trouble in finding the money to patent it.

As part of these two lines of proof the defendants have shown that the Drawbaugh Manufacturing Company, an organization formed under another name in 1867 for the purpose of manufacturing his inventions, with an actual cash capital of about $25,000, existed until the summer of 1873, and for a part of that time was

searching, but unavailingly, for some invention of his to manufacture, — the faucets and pumps which they originally intended to manufacture having proved unprofitable. They had a machine shop well fitted up, of which he had been foreman, yet he never offered to them, nor mentioned to any member of that company, a speaking telephone. The defendants have called three of them (Hertzler, Gorgas and Gorgas), without asking them any question relating to telephones. The complainants have called two of them (Hursh and H. S. Rupp), who swear positively that they never heard of the subject until after the grant of Mr. Bell's patent. The record books of the company show that the company was soliciting him to furnish them with some invention to occupy their machinery and capital with, — and soliciting him in vain; that upon one occasion they met at his shop for the purpose of seeing the operation of one invention which broke down in the experiment; and that throughout this period he never offered to them any talking machines.

The complainants have shown that among Drawbaugh's acquaintances were two telegraph superintendents, A. R. Keifer and S. C. Wilson, a patent solicitor, T. Weaver, and others to whom he would have disclosed the invention if he had had it, and who would have taken it up if such a thing had become known to them. And Drawbaugh himself had substantial personal means and resources.

Proved worthlessness of the defendants' depositions. The complainants have attacked individually many of the depositions offered by the defendants, and have shown in some cases that the witnesses, when other facts are brought to bear upon them, are unworthy of belief, and in a considerable number of cases that the witnesses who allege that they saw talking machines at a certain visit which they place before the date of Bell's patent, did not make that visit until after the date of Mr. Bell's patent. This destroys the value of all those witnesses; in many cases, as where the instruments they say they saw were the earliest and actually worthless instruments, it converts them into positive witnesses against the claimant; and the number of witnesses so destroyed is so large as to destroy all confidence in the mass of the testimony of which they are samples.

Proved inefficiency of the claimant's alleged early instruments. The defendants have put into the case seven instruments alleged to have been made before the date of Mr. Bell's patent, — F, B, C, I, A, D, E. Witnesses, consisting entirely of country farmers and farm laborers, have sworn, many of them in the most unequivocal manner, that through each of these instruments, especially F and B, they heard plain, distinct and perfectly intelligible speech and conversation, and Drawbaugh has testified that through the alleged earliest pair (F and B) he heard newspaper advertisements read frequently. The most important question in the case was whether these instruments could do what was alleged of them. The defendants knew that it was absolutely essential to their case to prove that they could. Three of them, alleged to be the latest in date, viz., A, D and E, were produced before the examiner in a working condition. The other four, F, B, C and I, were produced as mere wrecks. The defendants caused to be made by the claimant himself, and his brother under his own supervision, in his own shop, instruments which they allege were, which they put into the case as, and which the claimant and his expert, Mr. Park Benjamin, swore were correct reproductions of alleged originals. They were not correct reproductions of the only originals produced and sworn to. In each case they contained features of substantial improvement. In the case of F and B the improvements introduced in the reconstruction were very marked and very considerable. In the case of C and I the improvements were substantial though less important. The expert, Mr. Benjamin, testified that, before these reproductions and originals were put in evidence, he had personally tested them and found them to be good practical operative working instruments. (Deposition of Park Benjamin, defts, ii, 1256, p. 280, *supra*.) Entirely satisfied that this assertion was untrue, the complainants, by way of cross-examination, requested the expert to repeat his tests in the presence of witnesses. Thereupon, at a time and place selected by the defendants, under conditions chosen by them, the instruments were tested for three days in the presence of both parties. The result of those tests was to show that every man who testified that he heard plainly intelligible articulate sentences or newspaper advertisements through F and B, through C

and I, through F and A, through F and C, through F and I, had told an untrue story, either purposely, or because his imagination and friendship had got the better of his memory.

This evidence goes, in the first place, to the character of five out of seven of the instruments alleged to exist before the date of Mr. Bell's patent; but that is not, perhaps, the most important effect of it. More than half of the witnesses who have sworn to practical speaking telephones at Drawbaugh's shop before the date of the Bell patent have sworn that they heard perfectly intelligible sentences through F and B. A considerable number more swore that they heard perfectly intelligible speech through other couples made up out of the alleged first five instruments. We now know that every such statement is false, and we know, therefore, that witnesses who have sworn to such statements are unworthy of belief. Whether their error be the result of dishonesty, or of imagination, or of friendship, or of training and instruction, is not material. This absolute proof of what these instruments can and cannot accomplish thus deprives of all value absolutely about two thirds of the witnesses on whom the defendants most rely to prove practical instruments, and in the same way destroys the value of that whole class of testimony resting on mere memory, — and the defendants have nothing else to rest upon.

THE COMPLAINANTS' DEPOSITIONS IN DETAIL.

These can be roughly thrown into groups.

The history of Mr. Bell's work is given by

Alexander Graham Bell's speaking telephone patents:

No. 174,465, March 7, 1876, applied for Feb. 14, 1876, application prepared in 1875 and sworn to Jan. 20, 1876; patent printed complts, i, 55; application and file printed complts, iv, exhibits, p. 5.

No. 186,787, Jan. 30, 1877, applied for Jan. 15, 1877, printed complts, i, 63.

Depositions of:

Alexander Graham Bell and exhibits, complts, i, p. 105, and further cross-examination, complts, ii, 1273.

Thomas A. Watson, complts, i, 200.

Dr. Clarence J. Blake, complts, i, 335.

Edward L. Wilson, complts, i, 350.

Alexander Melville Bell, complts, ii, 1703.

Charles R. Cross, complts, ii, 1727.

Depositions of the experts, with tests of the Bell instruments, viz. : —

Prof. Charles R. Cross, complts, i, 20; ii, 1707.

Frank L. Pope, complts, ii, 1283.

Proof of infringement : —

Prof. Charles R. Cross, complts, i, 20.

Edward L. Bradley, complts, i, 52.

Documentary evidence of title of complainants, complts, i, 55–79.

Documentary evidence of formation of defendant corporation, assignments from Drawbaugh and others to it, etc., etc., complts, i, 83–102.

Evidence relating to Daniel Drawbaugh.

Publications by and about Drawbaugh and his inventions.

No. 75. *E. R. Holsinger*, complts, ii, 1210. — Mr. Holsinger was one of the most conspicuous witnesses for the defence. He was recalled by us to prove that he printed for Drawbaugh the advertising card in which Drawbaugh held himself out as an "inventor, designer and solicitor of patents," and in which he gave a list of his inventions, *but which did not mention any talking machine.* One hundred and fifty of these cards were first printed, and the witness thinks afterwards a second lot of one hundred and fifty, all after June 1, 1874; this is fixed by the type it was printed with, which Holsinger did not buy until the very last week of April or the first of June, 1874. To buy this type Mr. Henry S. Rupp gave him $15 in advance for some printing he expected him to do, and Daniel Drawbaugh gave him $5. He also printed, at a later time, some advertising bill-heads for Drawbaugh. In 1875–6 he wrote some articles for the Carlisle newspaper, which referred to Drawbaugh and his inventions, but did not mention the speaking telephone. This matter is considered more fully in connection with his deposition for the defendants, p. 106, *supra*.

Disclaiming publications and statements of 1878. The occurrences of the spring of 1878 are important in this case. Speaking telephones, under Mr. Bell's patent, were then in extensive use. Between January, 1878, and the middle of May, 1878, a number of persons visited Drawbaugh's shop, attracted by the report of his inventions. In every case it was the electric clock and not the speaking telephone which attracted them. One of these persons was a newspaper editor, another a newspaper reporter, and they and several of the other visitors wrote newspaper articles with respect to what they saw there. Two others, Grissinger and Theophilus Weaver, did not write anything, but have a distinct memory of what they saw and heard about telephones, and of the effect which Drawbaugh's disclaiming statements produced on them. All these persons saw speaking telephones there. But the impression which was left on the mind of all of them was that the invention which Drawbaugh prided himself on and took an interest in was the clock, and that as to the telephone he was at most a mere improver, or a man whose early experiments, if he made any, were abortive and unsuccessful, even in his own eyes, and were then acknowledged by him to be of such a character as not to give him any standing as an inventor of the telephone.

No. 11. *Henry R. Musser*, complts, i, 367.— He is the first of these witnesses. Age, 54; a resident for many years at New Cumberland, about three miles from Drawbaugh's shop; a lumber merchant, with saw mills and planing mills there. He has known Drawbaugh for thirty-five years. In January, 1878, he visited Drawbaugh's shop, and a letter of his dated Jan. 31, 1878, was published in the Baltimore *American*, Feb. 2, 1878. It gives some little notes about the community in which he lived, and then devotes a paragraph to Mr. Daniel Drawbaugh, speaking of the electric clock in high terms, but speaking of nothing else. Without any testimony from the writer, it is impossible to doubt, if Drawbaugh had ever done or said anything to impress him with the idea that that shop contained the first practical speaking telephone ever made, or that Drawbaugh even claimed to be the first inventor, that some sign of this would have found its way into the article. The fact of the publication, and its contents are, therefore, the best

proof of the nature of the interview and of the knowledge he had as an acquaintance and neighbor. But the witness says that he had knowledge through the newspapers that the electric speaking telephone was in public use; that at that visit he did converse with Drawbaugh about electric speaking telephones (p. 368).

"*Q.* 10. Will you state the substance of that conversation?
"*A.* My recollection is that he showed me some parts or work that he said he had been working upon for some time previous.
"*Q.* 11. Did he state how long he had worked at them?
"*A.* Not to me."

"*Q.* 14. If he had made any statements to you which led you to believe that he was really the first inventor of the speaking telephone, would you have mentioned that in your article also?
"*A.* I think I would."

"*Q.* 16. Had you ever heard up to that time that he had made any electric speaking telephones?
"*A.* I may have heard of it; I do not now remember."

The witness then says that he thinks he saw B on that occasion. He has no recollection of seeing the large ones, H and J; thinks he saw several parts of telephones, but can only definitely remember B.

Drawbaugh seemed to be chiefly interested in perfecting his clock. It appeared on cross-examination that Musser was settling up the business of Lee & Baylor, and he went there with reference to money which he supposed Drawbaugh owed to Lee & Baylor. It turns out, in fact, that Drawbaugh did not owe any considerable amount. This was a matter which was settled in the suit already referred to in the testimony of Henry Baylor (p. 48, *supra*). Most of the conversation while he was there related to the clock; that on the telephone was quite short, and Musser was impressed that Drawbaugh did not feel much interest in that subject.

No. 12. *Sade R. Weaver*, complts, i, p. 373.—Miss Weaver searched the newspapers of Harrisburg and collected from them all the articles in the years 1877, 1878 and 1879, which mentioned Drawbaugh; the next witness, Miss *Elizabeth R. Weaver*, her sister, p. 375, searched the Harrisburg newspapers for the years 1874, 1875 and 1876, to find all the articles relating to Drawbaugh. Her brother, *Jos. L. Weaver* (complts, ii, 1221), searched other newspapers. All that were found referring to Drawbaugh, in any

way, beyond the Holsinger articles (*q. v.* pp. 106, *supra*), were certain articles in 1878, a list of which is given on p. 373. The articles themselves are printed in complts, iv, exhibits, p. 338. The first of these articles, Feb. 1, 1878, contemporaneous with Mr. Musser's article in the Baltimore *American*, is of the same general tenor, so far as Drawbaugh is concerned, mentioning his clock as a remarkable thing, but not alluding to him as the inventor of any telephone.

No. 83. *Isaac Lloyd*, complts, ii, 1264.

No. 93. *F. U. Worley*, complts, ii, 1551.

The next newspaper article, published Feb. 13, 1878, was written by F. U. Worley, age 51, a school teacher in Harrisburg, where he has lived most of his life. In February, 1878, he visited Drawbaugh's shop with Mr. Isaac Lloyd, another school teacher in Harrisburg, an old friend of Drawbaugh's. For Lloyd's deposition see abstract p. 433, *infra*. Mr. Worley had intimately known Mr. Lloyd for about twenty years. Mr. Worley had heard about Drawbaugh's clock and went especially to see it. Mr. Lloyd had before that mentioned to him that Drawbaugh was an inventor, and had named certain inventions of his, not referring, however, to any talking machine or speaking telephone. They stayed at Drawbaugh's shop about three hours. They saw the magnetic clock, which was very fully explained. They saw a considerable number of other contrivances which he had got up. Mr. Worley knew that electric speaking telephones were in general use at the time, through the newspapers, and thus testifies about Drawbaugh (p. 1554): —

"*Q.* 17. Did he say anything to you about a telephone or talking machine, and if so, what?

"*A.* In speaking of the applications of magnetism — he was experimenting for the transmission of sound, but while he could produce sound, it was indistinct and confused, and he thought of remedying that by receiving the sound in a box to which he could apply the ear."

"*Q.* 19. At that visit, did Drawbaugh say to you in terms or in substance, or convey to you the idea that he had made an electric speaking telephone long before anybody else had?

"*A.* He did not.

"*Q.* 20. If he had at that visit made any such claim, or put forward any such idea, would you, or would you not, have mentioned it in your newspaper article?

"*A.* I would have considered it of such great importance that I would undoubtedly have mentioned it.

"*Q.* 21. Was the fact that you intended to write a newspaper article about him mentioned to him at that visit?

"*A.* It was so mentioned by Mr. Lloyd.

"*Q.* 22. Up to the time of that visit had you, or had you not, ever heard that Drawbaugh had done anything about a talking machine?

"*A.* I had never heard that Mr. Drawbaugh had done anything in that direction."

The conversation about telephones was quite brief; most of the time was occupied in looking at other machines, and Drawbaugh did not exhibit any telephones. He was cross-examined about the details of what was said to him about the telephones, and the result of that cross-examination was that Drawbaugh said very little, if anything, about the transmission of speech by his instruments, and did not go into details or particulars; and that the conversation about telephones was of such a character that it did not make very much impression on the witness, and Drawbaugh did not show much interest in the subject.

Their newspaper article, printed in the complts' exhibits, vol. iv, p. 338, and of Mr. Worley's deposition, p. 1551, occupies nearly a page of close print in the record, and is rather an elaborate description of the magnetic clock, with a very strong puff of Mr. Drawbaugh as the inventor of it.

His companion, Mr. Lloyd, complainants' witness, No. 83 (complts, ii, 1464, and *infra*, p. 433), confirmed Mr. Worley's account, differing from him somewhat in some small details as to the talk about the telephone, as might be expected with reference to an instrument which was so referred to and explained by Mr. Drawbaugh that it did not impress them as a matter which his work upon was, or was believed by him to be, of any considerable consequence.

Other newspaper articles. The articles by defendants' witness, Holsinger, which were written in 1875, and do not mention any talking machine have been considered, pp. 106, *supra*.

There is no other writing anywhere about Drawbaugh until 1878.

Miss Weaver and her brother, Mr. Joseph L. Weaver (complts, ii, 1221), searched the other newspapers of the county, particularly those of Mechanicsburg and Carlisle, and the articles from them are enumerated in J. L. Weaver's deposition and printed with the other articles collected by him (complts, iv, exhibits, p. 380 *et seq.*).

The earliest in date of these is an article in the *Saturday Evening Journal*, of Mechanicsburg, of April 6, 1878 (complts, exhibits, iv, 398). This is a statement that string telephones have been put up in Mechanicsburg, and contains the following: —

"We have been informed that Daniel Drawbaugh, the celebrated mechanic of Eberly's Mills, is inventing a telephone on a different plan from that now occupying the attention of the scientists, which will produce the sounds louder and plainer than the mother invention."

The *Independent Journal* of Mechanicsburg, April 17, 1878 (*ib.* 398), contains an article headed "Old Curiosity Shop." It is a description of Drawbaugh's machine shop and of Drawbaugh. It states that: —

"For many years it has been the laboratory of Daniel Drawbaugh, the well-known and successful inventor. There is nothing engages the attention of the scientific world that does not also interest Drawbaugh. His fancy in the mechanic arts is oddly assorted and various, as can easily be imagined. His inventions have been many and useful, and his prospects for turning out something great and wonderful as bright as ever. Among some of his best productions are nail machines, faucets and electric clocks. . . . We are under obligations to him for much information in general and telephones in particular, and the *Independent Journal* will be glad to announce the completion of the new telephone he is now constructing, and hopes the speaking machine will bring many dollars into the pockets of its ingenious inventor."

It is very significant to observe the impression which a long talk with Drawbaugh at his own shop made on this writer. Clearly the informant was not a man who had worked ten years on the telephone and nothing else except when called away for labor for his family; he has had leisure to dabble in all things, and what interests him are the things which at the same time engage the attention of the scientific world.

No man would have so written if he had been told that Draw-

baugh was the first inventor of any telephone. No newspaper reporter, hunting for an item, would have let that slip.

For the other articles in the Mechanicsburg newspapers, published at the same office not long before, speak of the string telephone at some length, and refer to the electric telephone as Prof. Bell's telephone. It is very clear from these two articles that Drawbaugh's telephone work was spoken of as something which was of that present time, and not as an old and long-accomplished invention. Nor are there references to it such as could possibly have been made by a visitor to the shop who had been informed that Drawbaugh was the first man in the world to make a speaking telephone. The reference in each case is in the present tense. "Daniel Drawbaugh *is* inventing a telephone on a different plan." "Will be glad to announce the comp'etion of the new telephone he is *now* constructing."

Mr. Rockafellow, the writer of the article of April 17, 1878, made an affidavit which was filed with the opening papers and exhibited to Drawbaugh on his cross-examination, and his testimony was so substantially an admission that the character of the conversation was as stated in the affidavit, or, at any rate, was so far from containing any assertion that he had stated to the writer that he was the *first* inventor of the telephone, that it became unnecessary to call the writer as a witness. (See Drawbaugh's dep., x-ans. 1526–7, defts, ii, 1079.)

The article about Drawbaugh next in date is in the Harrisburg *Telegraph* of April, 1878 (complts, iv, exhibits, p. 388).

The following is the whole of it: —

"Daniel Drawbaugh of Eberly's Mills, the mention of whose wonderful clock was first mentioned in the columns of the *Telegraph* some time ago, is now engaged in the construction of a new telephone. If it is as great a success as the clock, Mr. Drawbaugh can be congratulated."

It cannot be doubted that that article was the result of some particular stir about the telephone by Drawbaugh *at that time*, and it negatives the idea that the writer, if he ever came in contact with the claimant, — and he must have come in contact with some one able to furnish that information, — had any notion that Drawbaugh

claimed or was entitled to claim that he was the first inventor of any telephone.

No. 18. *James P. Matthews*, p. 540. — The article which ranks next in date, though it was not the next one published, was one written by Mr. James P. Matthews, an editor of the Baltimore *American*. He had read Mr. Musser's article, and having some fondness for scientific curiosities, he went to Drawbaugh's shop for the purpose of seeing his clock, the only invention he had heard of. His visit was made in the last of April, 1878. He made some brief notes of what he learned, and subsequently wrote from them an article printed in the Baltimore *American* of Nov. 28, 1878. He went to the shop with a friendly desire to puff Drawbaugh if he found anything worth puffing. Drawbaugh met him; understood that it was a friendly visit, and so testifies on cross-examination; knew that he was an editor (defts, ii, 1075); agrees with Mr. Matthews as to the date of the visit; received the article when printed, either as a slip or in the newspaper; never made any objection to it. This article is chiefly devoted to the electric clock, but it contains the following paragraph at the end (complts, i, 542): —

"It may be mentioned that Mr. Drawbaugh constructed a rude telephone long before Edison loomed up as the boss inventor. He never expected to send articulate sounds over a magnetized wire; but he believed that an alphabet could be arranged after the manner of the musical scale, and that messages could be transmitted and understood by the variations of tone and pitch. This unlettered country mechanic came very near anticipating Edison and Bell in the invention of the telephone. Nothing but his poverty prevented him from conducting his experiments to a successful issue."

Mr. Matthews's deposition states that that paragraph correctly represents the impression left upon his mind by what Drawbaugh said and showed him about the speaking telephone. Drawbaugh showed him some instruments which he cannot identify and does not distinctly remember, and he states that Drawbaugh's talk and interest seemed chiefly to be centred upon the clock, and not much upon the telephone.

Now, with every possible allowance for error and mistake, — and there are very likely some errors of detail in Mr. Matthews's account

of the clock, and in his account of what Drawbaugh told him about the telephone, — it is impossible to doubt that the telephone was talked of; that Drawbaugh suggested that he had experimented earlier than Bell; that the question of priority was referred to in the conversation, and that Drawbaugh's statement conveyed the idea that the utmost of his claim was that he had come "very near" to making the invention, but had not done so and that *all his experiments had been and were recognized by him as unsuccessful*, and conveyed this idea so distinctly that Mr. Matthews, with every desire to puff Drawbaugh, wrote thereupon a statement, which, if substantially true to any extent, is perfectly fatal to Drawbaugh's claims. This article, then, published more than two years before any controversy arose, known to Drawbaugh and never refuted by him, written by a man who had no motive to depreciate, but every desire to exalt Drawbaugh, and who had no information except what he obtained from Drawbaugh himself, must be taken as the highest possible proof of a distinct statement by Drawbaugh when the question was mooted, that he had never done enough to entitle himself to be mentioned or thought of as the inventor of the speaking telephone.

Mr. Drawbaugh was cross-examined about this and he was four times asked whether the statements contained in that article were correct, and to mention everything that was incorrect. (See Drawbaugh's dep., defts, ii, 1075–8.) He criticises the details of the statement; he refers to what is said about the telephone; he criticises some details of that and points out what he thinks are errors in it; but *he does not venture to make any sweeping denial that he did say that to Mr. Matthews which justified the statements in the article to the effect that although Drawbaugh experimented early, he never reached the point of practical success*, and never thought he did, and gave up all hope of it before Edison or Bell came into the field. The strongest statement he makes against Mr. Matthews's article is the following (defts, ii, 1078): —

"*X Q.* 1524. Have you mentioned all the statements referred to in the last question which you think are correct?

"*Ans.* I do not see why I should have made those statements to him when I know at the same time that I had telephone apparatus

that numbers of others had seen. I don't see why I would have made that statement. That is what makes me think I did not make that statement."

He does not pretend to assert that he did not, and Mr. Matthews testifies positively that he did; but the strongest deposition could not be of so great weight as the publication itself.

History of Cumberland County.

No. 31. *James D. Scott*, i, p. 714.
No. 29. *J. C. Nesbit*, i, p. 687.
No. 30. *Mrs. Emma McDowell*, i, p. 707.
No. 32. *R. G. Foust*, i, p. 732.

In February, 1879, James D. Scott published an illustrated history of Cumberland County. It was one of those histories gotten up by canvassers for local sale and full of personal gossip, and to it was added an appendix with short biographies of those who would either pay for them or be induced, perhaps, by that means, to subscribe for a copy which would not have otherwise taken, the subscription being $10. Drawbaugh was a subscriber. In the deposition of the defendants' witness and agent, Shank (defts, i, 33, ans. 109), it appeared that at one time Shank collected from Drawbaugh an execution in favor of James D. Scott for $10 and interests and costs, and this execution Mr Scott testified (complts, i, 719) was obtained on a judgment on the note which Drawbaugh gave for his subscription.

This history had in its body as part of the "History of Lower Allen Township" the following article (complts, i, 688):—

"*Milltown, or Eberly's Mills.*—This village is located on Cedar Run, one eighth of a mile from its confluence with the Yellow Breeches. It has eighty-three inhabitants, and is on a tract of land originally owned by a Mr. Thompson. It has fifteen houses, one of which is of brick, two of stone, two rough cast, and the remainder of wood. It has one church, one store, one blacksmith shop, one shoe shop, and one machine shop. A merchant and grist mill was built in 1817 by George Fahnestock, but has since been owned by Price & Emmert, Fleck, Eberly, Beetem, Leonard & May, and Dillinger, the present proprietors. It is on Cedar Run, has four sets of stones, once had an engine, which has, however, been abandoned, and has once been thoroughly remodelled. Near it is an old mill

which must have been built in the last century, but has been converted into a dwelling-house. What was once a clover-mill has been remodeled and fitted up as a machine shop. The present proprietor, Daniel Drawbaugh, some years since formed a stock company for the manufacture of measuring faucets and rotary pumps, and for a while the machinery was used for the purposes of this company, but finally the faucet machinery was removed to Mechanicsburg, and the works were much reduced. They are now applied, under the care of Mr. Drawbaugh, to the manufacture of his patent electric clock, which is a marvel of ingenuity, and promises to supersede all other clocks. They are said to be run by a turbine wheel of fifteen horse-power, and to be worth not less than $7,000."

It appeared to us very extraordinary that so much space should be devoted to the village of Milltown, and to Drawbaugh and his shop, by a local historian, seeking to say the most he could to make his neighborhood famous, without stating that Drawbaugh was the first inventor of the speaking telephone, and had had practical instruments in his shop years before the rest of the world heard of them,— if such were the fact, and if that fact were notorious throughout the community.

In the appendix to that history was a biography of Daniel Drawbaugh, as follows (complts, i, 707) : —

"DANIEL DRAWBAUGH :

"An inventive genius of whom our country may feel justly proud, resides at his birthplace, Milltown, three miles southwest of Harrisburg. His attention has, as a general thing, been devoted to the improvement of manufactures. His first invention was an automatic sewing [sawing] machine, followed by various others, including a barrel stave pointer [jointer], which was patented in 1857 and pretty generally introduced. Several patents were also taken out in 1855. Many of his inventions, up to this time, had been devoted to the improvement of barrel making. Mr. Drawbaugh understands photography thoroughly, preparing his own instruments and chemicals, and improving the process. Telegraphy and electric machines followed. He is the inventor of the justly celebrated 'Electric Clock,' and of several kinds of telephones, one of which is operated by a battery and the other by induction. It will thus be seen that Mr. Drawbaugh has penetrated large fields in search of information, and with very remarkable success."

This, it must be remembered, was in a book published in the spring of 1879, when Mr. Bell's patent was three years old, and

when he had forty or fifty thousand speaking telephones in use. In the spring of 1878 the newspapers had described Mr. Drawbaugh as making improvements in telephones, and undoubtedly he, in common with hundreds of others, was *then*, and some time afterwards, engaged in that attempt, though he never sought to patent any of them until long after this suit began. A person so engaged might well be described, in the spring of 1878, as "the inventor of *several kinds* of telephones"; but no one would have described in that language a man who was, or was believed to be, the first inventor of *any* kind of electric telephone. There was no event in the history of Cumberland County of one fiftieth part the interest, or which could reflect one fiftieth part so much honor on the county as the fact, if it were a fact, that Drawbaugh was the first inventor of the speaking telephone; and when it finally turns out that *Drawbaugh was the person who in substance wrote or furnished this biography*, it becomes perfectly certain that the man who thus wrote of himself in 1878–9 was not a man who claimed, or thought he had a right to claim, that he was the first inventor of any speaking telephone.

Now, the proof upon this subject, and of the origin of these articles, in addition to the book, is as follows: —

No. 31. *James D. Scott*, complts, i, 714. — He testifies that the article entitled "Lower Allen Township," in which the paragraph about Eberly's Mills and Drawbaugh's shop, above quoted, occurs, was prepared by Mr. J. C. Nesbit, whose name appears in the title of it, and that with Mr. Nesbit was associated a Mr. Hull, a friend of Mr. Nesbit. The date of their engagement for this work is fixed by Mr. Nesbit's subscription for a copy of the book, which is produced, and is dated July 7, 1878. Drawbaugh also subscribed for a copy of the book on Aug. 21, 1878. The arrangement with Mr. Nesbit was to write the "history of Lower Allen Township."

Scott testifies (p. 714): —

"*Q.* 5. Did you personally arrange with Mr. Nesbit to write the history of Lower Allen Township? (reference being to what is on page 200 of the book)?

"*A.* Yes, sir."

Mr. Nesbit testifies (*ib.* 688) that Mr. Scott engaged him to write "the history of Lower Allen Township for this book," and he named nothing else that he or Hull were employed by Scott to do.

Mr. Hull assisted him in preparing the information for it, and the information from which the passage about Milltown or Eberly's Mills was written was collected by Mr. Hull and Mr. Nesbit, together, at Milltown. They went first in Milltown for information to John B. Drawbaugh, the claimant's brother; next to old Mr. Hart, to whom John Drawbaugh referred them; then to Daniel Drawbaugh's machine shop. They saw Daniel Drawbaugh there and from him obtained information for that part of the article. They stayed at the shop about an hour. Mr. Hull and Mr. Drawbaugh were together the whole of the time; Nesbit was with Mr. Hull and Drawbaugh about half the time. Mr. Hull is now dead.

During the visit, Mr. Nesbit looked at the electric clock, and at other machinery. Drawbaugh knew that the information was obtained for the purpose of writing an article to go into this history of Cumberland County, and the draught for the article was written then and there in Mr. Drawbaugh's shop by Mr. Hull, and on their arrival home at Lisburn, before separating, Mr. Hull handed it to Mr. Nesbit (p. 690). From that draught the article was written out by Mr. Nesbit and sent to the publishers. The actual original draught in Mr. Hull's handwriting was produced and identified by Mr. Nesbit and is printed (p. 692). The article as printed is evidently a mere condensation of it; the language and frame of both are the same. There is not a word in it about telephones. The witness, Nesbit, testifies as follows (p. 691): —

"*Q.* 32. Did Mr. Drawbaugh tell you on that occasion, or say in your hearing, that he claimed to be the first inventor of the speaking telephone?

"*A.* I have no recollection of it.

"*Q.* 33. If he had told you on that visit that he was the first inventor of the electric speaking telephone, would you have mentioned that in your history?

"[*Objected to by Mr. Hill, as calling for mere opinion, and hypothetical.*]"

"*A.* I would.

"*Q* 34. Had your attention been attracted to the electric speak-

ing telephone at that time by reading about it in the newspapers, or otherwise?

"*A.* I had noticed it in the newspapers previous to that time."

Mr. Nesbit testifies (p. 693) that this article was written about August, 1878.

There was an attempt, not to prove, but to assert, under the guise of objections entered by the defendants' counsel in the record, that Mr. Hull and Mr. Nesbit were employed by Mr. Scott to write the biographies in the appendix to the book. That is entirely untrue, and the evidence is explicit about it. The testimony of both Scott and Nesbit as to their employment in every case was that their employment was to prepare the "*history*" of Lower Allen Township, the part in the body of the book being entitled the "History of Lower Allen Township." The draught of that "history" produced was found among Mr. Hull's papers. Mr. Comfort, connected with the complainants, sent Mr. Coble, who had been somewhat concerned in the writing of some of the other parts of the history, to Mr. Hull's widow to get it, and Mr. Coble gave it to Mr. Comfort, and, at the same time, or a day or two after, the witness, Nesbit, saw it in the room of the complainants' counsel at Harrisburg.

It appears that some copies of the history were published with an appendix containing the biographies, and others not. The publisher thought well of having them in; the editor did not like the notion of putting such things in to help the sale of the book (Scott so testified, pp. 700, 701). Several persons wrote these biographies. Among others, Mr. Hull, in fact, wrote several (Scott, p. 702). Mr. Nesbit says expressly that he does not think that Mr. Hull had charge of the biographical part of the book, but the witness thought it possible that Mr. Hull might have written Drawbaugh's, and he, at the request of the complainants' counsel, went to look among Mrs. Hull's papers to see if there was anything to be found, but did not find it, although he found biographies of some other persons which were known to have been written by Hull. Thereupon the respondents produced a paper, which they styled "Exhibit Hull Manuscript," which is printed, p. 705. It is a paper written in pencil in the handwriting of Mr. Hull, and *is produced by the defendants them-*

selves. Obviously Drawbaugh employed Hull to write it, and received it from him.

No. 30. *Mrs. McDowell*, complts, i, 707, daughter of Mr. Scott, testified that she assisted her father in preparing part of the book, and that she condensed Drawbaugh's biography for publication. Neither in the biography nor in the original draught article produced by the defendants entitled "Hull Manuscript" is there any statement that Drawbaugh is the original inventor of the telephone. It is evident that the printed paragraph is condensed from a copy of the Hull manuscript. Mrs. McDowell states that it was her business to revise and shorten the manuscripts submitted. She says the manuscript submitted to her for this purpose was in ink, and according to her recollection was in the same handwriting as the handwriting of Drawbaugh already put into the case, and which was shown her on the witness stand (p. 709). She testifies that she has been in the habit of examining handwriting, etc., and was not cross-examined in any attempt to contradict or control that assertion. Her evidence, therefore, is at least technically competent and fairly enough persuasive unless contradicted. *Drawbaugh does not venture to go on the stand to contradict her, nor to expose himself to cross-examination about this matter.*

In the course of some objections of counsel, complainants objected to certain statements made by the defendants' counsel (see p. 704), upon the ground "that *it does not appear how long the defendants have had the paper in their possession*, nor why they did not produce it before." Inasmuch as it was produced by them from their own possession, and as it clearly was the foundation of the article in the book, and the defendants so admit by a comparison they make (see p. 730), and as Mrs. McDowell testifies, and Drawbaugh does not venture to contradict her, that the paper actually sent to the publishers as in Drawbaugh's handwriting, and as James D. Scott, the publisher, testifies that when he took Drawbaugh's subscription Drawbaugh agreed to furnish his biography, and afterwards sent it to Mr. Scott, it must be taken that *Drawbaugh is substantially the author of that biography*, — written by Hull, copied and revised by Drawbaugh, who retained Hull's original draught.

It is perfectly certain that if he had behind him the story which is now told of him, he would have said that he was the first inventor of the telephone and had it for years before anybody else had.

James D. Scott, the publisher, solicited the subscription of Drawbaugh and took it himself, Aug. 21, 1878 (p. 716). He arranged with Drawbaugh then to write his own biography, and took some memoranda, but found that Drawbaugh wanted a good deal (p. 716): —

"*Q.* 15. Did you make any agreement or arrangement with him about publishing his biography in your proposed book; and if so, state generally the nature of that arrangement, and what was done on that occasion about preparing his biography?

"*A.* Yes, sir; I agreed to publish a short biography of subscribers at that time, and in order to obtain this biography I had printed slips with questions to be answered; I commenced asking him the questions to fill up the slip, and had it partly filled up when I found that I couldn't get in all he wanted on my slip; and I told him he had better write out a little sketch of what he wanted for himself; and he thought so too; and we agreed to leave it that way, — for him to write out a short sketch of his history and mail it to me.

"*Q.* 16. Did you afterwards receive that sketch by mail?

"*A.* Yes, sir."

This sketch, received by mail, was the one which he handed to his daughter, and which she condensed into the book (ans. 16, 21–4, pp. 717, 718).

The respondents' counsel here undertook under guise of an objection to put into the deposition *his own allegation* that Mr. Hull, in whose handwriting the original paper was, was one of the agents of Scott for preparing the biography; but nobody had previously testified that he was, and Mr. Scott, upon being at once asked (Q. 17, p. 717), explicitly declared that Hull was never employed by him, nor asked by him to write Drawbaugh's biographical sketch, nor ever spoken to by him on the subject.

"*Q.* 17. Was or was not Mr. Hull employed by you to prepare a biographical sketch of Mr. Drawbaugh for publication in this book?

"*A.* He was not employed to write biographical sketches.

"*Q.* 18. Did you ever ask Mr. Hull to write a biographical sketch of Daniel Drawbaugh?

"*A.* No, sir.

"*Q.* 19. Did you or did you not ever have any conversation with Mr. Hull with reference to writing a biographical sketch of Mr. Drawbaugh for this book?

"*A.* I never did, I don't think.

"*Q.* 20. Did you or did you not ever ask any one to prepare for you a sketch or the materials for it, except in the suggestion made to or by Mr. Drawbaugh on the occasion when you took his subscription?

"*A.* I think not; I don't recollect that I did.

There is not the slightest attempt at evidence to the contrary.

Finally, Mr. Scott says that Drawbaugh said nothing to him about his being the first in the world who had invented or made an electrical speaking telephone, and he is sure that if that had been stated to him by a man whose biography he was about to publish, it could not have escaped his mind (p. 718): —

"*Q.* 25. At the time when you were at his shop and got his subscription and talked to him about his biography, did he or did he not tell you that he was or claimed to be the first man in the world who had ever invented or made an electric speaking telephone?

"*A.* No, sir; he didn't tell me anything of that kind."

No. 32. *Robert G. Foust*, complts, i, 732, was canvassing agent for Scott, having had a good deal of experience with G. M. Hopkins and other publishers in a similar capacity. He did not take Drawbaugh's subscription, but delivered the book to him. Drawbaugh did not have the money ready at the time, and offered to give his note, and Foust went back a second time, hoping to get the money, but finally took the note. He therefore had two interviews with him in February, 1879, the date being fixed by the note. He opened the book at the two places where Drawbaugh was mentioned, showed him the sketch of Eberly's Mills and of his shop, and his own biography. Drawbaugh objected that it was not so long as he expected, *but said it was all right.*

Upon cross-examination (p. 738) Foust said that he thought the subject of telephones was mentioned while he was there. Drawbaugh made no objection to taking the book, took it and gave his note.

The defendants' counsel attempted by a bold assertion in one of his questions to entrap the witness into saying that the copy of the history given to Drawbaugh did not contain the biographical sketch.

The witness denied this and asserted that it did. Inasmuch as the defendants have not produced a particle of evidence on the point, and have not dared to put Drawbaugh on the stand, it must be taken that all this witness's story about the conversation and transaction is true.

We have got it, then, that this "history" was written in Drawbaugh's shop, and was approved of by him; that *the biography was furnished by him*, and, as printed, was approved by him.

There is other explicit and convincing proof that the best which Drawbaugh had to show in the fall of 1876, and in the spring of 1877, when Mr. Bell had become famous, was the practically worthless tin-can instrument B; and that in the spring of 1878 he repeated to other persons, under peculiarly convincing circumstances, the disclaimer of invention which, about the same time, he made to Mr. Matthews, and which Mr. Matthews published in the Baltimore *American*.

An important witness upon this, and upon all parts of the case is

No. 14. *Theophilus Weaver*, 377.—Age, forty-nine; Harrisburg; solicitor of patents, model maker, etc. This witness, whose relations with Drawbaugh upon the subject of inventions and patents were peculiarly intimate from 1867 until this suit began, had no knowledge that Drawbaugh had a speaking telephone before 1876, never heard that Drawbaugh claimed to be the first inventor of the speaking telephone until this suit began. In the spring of 1878 he was told by Drawbaugh that at an early date he had experimented in attempting to make a speaking telephone, but had failed and given up the idea, and had not done enough to be considered the inventor. This witness was a patent solicitor at Harrisburg. He was also an inventor. His personal relations with Drawbaugh have been rather intimate since 1867. Their intercourse with each other chiefly turned upon questions and matters relating to patents and inventions; Drawbaugh, from time to time, consulted him about patents, and got him to look up various questions in the patent reports upon the state of the art on various subjects; and Drawbaugh, in turn, some-

times assisted Weaver by his mechanical knowledge. Weaver applied for some patents for Drawbaugh in 1878. In 1875 he had charge of some patent matters, and an interference for the Axle Company (then carrying on business in Drawbaugh's shop), and, in that capacity called and examined Drawbaugh as an expert witness and model maker.

In 1879, as solicitor for Drawbaugh, he prepared Drawbaugh's preliminary statement in the faucet interference, and assisted in carrying on the controversy. He was not only a patent solicitor, but was himself an inventor, having taken out a dozen or twenty patents on his own inventions, and was to some small extent an exploiter of inventions for himself and others. Occasionally he visited Drawbaugh's shop, and from time to time Drawbaugh came to his house and office, their intercourse on such occasions generally turning upon questions of inventions and patents and mechanisms. Drawbaugh never spoke to him on the subject of the speaking telephone until the spring of 1878. It is certain from the situation of this witness and the relations of these parties, that if Drawbaugh had had an operative speaking telephone from 1867 to 1876, which he even thought fit to patent, and which he desired to patent, hesitating only for lack of ready cash to pay the expense of doing it, he would have disclosed it to this witness. The fact that this witness knew nothing of the alleged instrument under all these circumstances is absolutely conclusive against the claimant's case. That he did not even hear of it is certain.

These are the principal facts which are spread through two days of direct examination, and seven days of cross-examination, in the deposition of this witness. The great effort made on this unusually long cross-examination, shows the importance the defendants attached to this deposition. The facts which we have stated, and on which the value of this deposition rests, are, every one of them, proved by evidence absolutely independent of the credibility of this witness, except those as to the statements Drawbaugh made to him in the spring of 1878, and as to those, in spite of their crushing effect, *Drawbaugh did not venture to go on the stand and deny them or qualify them.* His counsel called two hundred witnesses in rebuttal, but did not call him.

Mr. Weaver was originally a school teacher, and became principal of the Boys' High School, at Harrisburg, in 1864. At that time he made some inventions which he patented. He continued to make more, and this led him to take out patents for others, to make patterns, build experimental machinery, introduce and sell some of his own patented articles, and so on. These are matters of public record; he specified some of the early patents of himself and others which he took out. Drawbaugh's acquaintance with him is proved by Drawbaugh's own deposition; by the uncontradicted statement of Mr. Weaver, that he had business transactions with Drawbaugh as early as 1867; by a friendly letter upon a mechanical question which Drawbaugh wrote him in 1872, and which happened to have been preserved; by the Patent Office files and printed testimony in the Axle Company's case (1875), especially the deposition of Drawbaugh, and his examination by Mr. Weaver; by the certified papers from the Patent Office, showing Weaver's connection with Drawbaugh's patents; by Drawbaugh's deposition (defts, ii, 991): —

"*X Q.* 1083. Did you ever consult Mr. Theophilus Weaver, of this city, in relation to any invention of yours relating to vibrating signs operated by electricity, or in relation to the Brush patents on electric light apparatus?

"*A.* I do not remember; he drawed up specifications for me on other inventions, and I often asked him to make search for me on different inventions; but don't now remember what."

P. 1023. "*X Q.* 1222. Do you remember that Mr. Theophilus Weaver was Mr. Kline's counsel in that proceeding?

"*A.* Yes, sir.

"*X Q.* 1223. Had you known him before that?

"*A.* Yes, sir."

Drawbaugh's own deposition as an expert and model maker, taken by Weaver in that interference in 1875, was shown Drawbaugh, confessed by him and put in evidence.

That Mr. Weaver knew nothing of the talking machine is shown, *first*, by the fact that although the defendants were engaged in collecting testimony for this controversy six months before the suit was brought, before they had published their claim to the world, and before the Bell Company had a suspicion that any such claim existed or would ever be made, they never took Mr. Weaver's affidavit. And, *second*, it is proved by passages just quoted from Mr. Drawbaugh's

deposition; he could not have made x-ans. 1063 if he had ever consulted Weaver about his talking machine or showed it to him; for Weaver, with his knowledge of machinery and patents, would have been worth more, ten times over, than any witness or all the witnesses called for the defence, if Drawbaugh had ever shown him an operative instrument. But it would be, in the nature of things, impossible for the defendants to have had testimony from Mr. Weaver to support such a story as they tell; for, if an operative electric speaking telephone had in 1872, or in any other year before they were known to the world, been shown to Mr. Weaver, or any patent solicitor, no matter how poor the inventor had been, and whether he was willing to give a half or any portion of the invention to get a patent taken out, an application would have been on its way to Washington before forty-eight hours had elapsed. The fact is, it is impossible that any man of respectable intelligence, knowing anything about patents, could have known of the existence of an operative speaking telephone at the time alleged by Drawbaugh, and not have used it or gone to the Patent Office with it. It is impossible that a witness of such a character could ever be called to prove the long continuance of a fact which, if it came to the knowledge of such a person, could not have remained a fact, — and that is the reason why Drawbaugh has called no such witness and cannot find one.

It will thus be seen that the chief value which we could wish to derive from Mr. Weaver's deposition is given by facts which do not rest upon his oral statements, but which are proved by papers, or confessed by Drawbaugh. We say this, because his cross-examination was nothing but a series of attempts which we can properly call scandalous to assault him and insult him; but not one of them succeeded at the time, and not one of them has been followed up during the year, nor among the two hundred witnesses called by the defendants in rebuttal, and so we have a right to say that not only were these assaults unfounded, but the defendants when they made them in his cross-examination knew they were unfounded. They consist of a series of scandalous insinuations put into the questions, and of nothing else. We, however, were not quite content to let the matter rest there. Some of these insinuations could be met by documents directly, and others by the memory of the various persons who

had been clients of Weaver. We called enough of those persons to show that there was no foundation for the assaults; others of them were interested in the Drawbaugh Company, or had been witnesses for Drawbaugh, and they were not inquired of. Not a witness subsequently called by the defence referred to Mr. Weaver, nor to any of the matters mentioned in his deposition; no attempt has been made to contradict him.

Mr. Weaver's deposition in detail is as follows: —

Is forty-nine years old. He states his occupation to be solicitor of patents, pattern maker, builder of experimental machinery, manufacturer, etc. He became principal of the Boys' High School in Harrisburg in 1864, and has lived there ever since. In that year he patented an improvement in school desks, and has since then taken out a dozen or more patents on his own inventions, a list of which he gives, running through a series of years. He had some professional assistance in prosecuting the applications for his earlier patents, but soon dispensed with that, and in 1868 began to take out patents for others. He names the first and several others which he took out; so that, if there was any doubt about the matter, he could have been and would have been contradicted by the records of the office.

In 1866, he and Mr. Isaac Lloyd, a witness afterwards called by us (complts, ii, 1264; p. 433, *infra*), purchased an invention, the construction of which required a stamping machine. They heard that Mr. Drawbaugh had made a machine of that kind for another purpose, and he and Mr. Lloyd went to see Mr. Drawbaugh in the spring of 1867, and he then made his acquaintance. Drawbaugh did not build the machine for them, but once came to the machine shop where it was being built and spoke of some changes which had better be made in it; and the witness again visited his shop in consequence of that conversation. He saw a number of devices there, and says that Drawbaugh seemed to take pleasure in showing them (pp. 377–79). He has been there generally once a year, and sometimes oftener ever since. Drawbaugh frequently called at his office between 1867 and 1877, and their conversation would run upon inventions. He had in his office the Patent Office Reports and the *Official Gazette*, and Drawbaugh's statement that he often asked the witness to make search for him on different inventions is true. Witness

mentions certain instances which he particularly remembers where and when he met Drawbaugh and conversed with him upon mechanical subjects. He met Drawbaugh at the State fair about the 1st of October, 1868, and says that Drawbaugh was at that fair exhibiting a nail machine and rotary pumps, while the witness was also there exhibiting his inventions. He met Drawbaugh again at the State fair in 1869, exhibiting his rotary faucet and rotary pump, while the witness was again exhibiting one of his own inventions. Witness refers to the newspaper reports of the period which mention Drawbaugh's exhibition (p. 381). In 1869 he was told by the defendants' witness, Dr. J. W. Moffitt, that Drawbaugh was the original inventor of the Giffard injector, and in speaking to Drawbaugh on the subject, Drawbaugh gave him the impression that he claimed to have been the first inventor of it, though he never knew any foundation for this claim except the assertions which Drawbaugh then made; and the witness adds (p. 382):—

"This opened my mind to study Mr. Drawbaugh carefully, either as an inventor of greater claim than I supposed he was, or that he was in the habit of talking in a visionary manner; that is, imagining that he was an inventor, when perhaps he was not really that character."

Considering that Drawbaugh professes to have invented the Giffard injector, the magneto telegraph, the dial telegraph working by magneto currents, the autograph telegraph, the magneto key, the fire alarm, the electric clock, the phonograph, all known forms of speaking telephones, and all principal improvements of detail in them, it is not very difficult to know which category to assign him to.

Witness remembers particularly a discussion with Drawbaugh in the summer of 1871, about an invention of his own. Witness says that in 1867 and 1868 he had a good deal to do in connection with defendants' witness, Dr. Moffitt, who now claims to have known of Drawbaugh's talking machine at a very early date. He took out some patents for Dr. Moffitt, the first as early as 1868, and assisted him in improving the devices patented. Made an invention of his own in connection with that and sold it to Dr. Moffitt for

a few dollars, and took out a patent for Dr. Moffitt on an invention of the doctor himself. Afterwards, in 1873 and 1874, he took out two more patents for Dr. Moffitt, May 6, 1873, Feb. 24, 1874 (pp. 383–5, 389). Dr. Moffitt alleges in his deposition that he talked and understood through a talking machine at Drawbaugh's shop in 1873; if that were true he certainly would have mentioned it to Weaver; yet he never did.

In 1872 he consulted with Drawbaugh about a rotary engine which he was preparing an application on, and Drawbaugh referred him to some previous descriptions of something of the kind, and wrote him a letter about it, which happens to be preserved, and which is put into the case (p. 386). Its importance is in showing the relations of the parties.

In 1873 Mr. Isaac Lloyd, of Harrisburg, school teacher, and a friend of Drawbaugh's, told the witness about Drawbaugh's magnetic clock, and Mr. Lloyd and witness went to Drawbaugh's shop to see it. He describes the clock and says that Drawbaugh showed certain other devices of his at the time (p. 387). Lloyd confirms this. (See abstract of Lloyd's deposition, p. 433, *infra*)

In August, 1874, Drawbaugh and Wilson Baer came to his office and mentioned something relating to car couplers, upon which the witness then had an application pending, the date of which he fixes by an official letter as Aug. 25, 1874 (p. 387).

In 1875 the witness was counsel in an interference case on Kline's axle patent, which he had reissued. As the Kline Axle Company was then carrying on business at Drawbaugh's shop, with Drawbaugh as their foreman, Weaver frequently met Drawbaugh, and examined him as a witness (p. 388). The dates of the Kline patent and the papers relating thereto bear out this assertion. At the beginning of March, 1876, witness contemplated a bargain with the Kline Axle Company to purchase their machinery and stock and carry on their axle business himself. With that in view he went twice, at least, to Drawbaugh's shop, where that business was carried on, to make a rough estimate of the property, and finally to make a carefully itemized inventory which he produces, dated March 2, 1876. He says that while there, on that occasion, and when waiting one morning for the others to come, he and Wilson Baer were shown all through

the place by Drawbaugh, who exhibited and explained a large number of devices which he had made. Among them were an electric fire alarm; a dial telegraph, which the witness thinks he had seen before; a magnetic clock, which the witness had seen before; a carpet rag needle; a new lathe which he was making; a stamping machine for stamping tin plates; and while examining these things Drawbaugh took them into all the rooms on the upper story, to wit, the large room and the two small rooms, one of which was his private work room, and the other of which was his private office room, so called. According to Drawbaugh's story all his telephones were kept in some of these rooms (pp. 390–2). Mr. Weaver saw none.

Wilson Baer was a witness called by the defendants (No. 101, defts, i, 663; p. 198, *supra*). If this story were not true, or if on this occasion any speaking telephones were tried or seen, Mr. Wilson Baer would have been called in reply to say so. He was not; on the contrary, he substantially confirms Weaver, for his deposition only amounted to the statement that he had a vague kind of an impression that Drawbaugh once said something to him about a speaking telephone, but he has no recollection of ever seeing any. Mr. Weaver adds that though he has named certain interviews which he specifically remembers, he had others with Drawbaugh during the years in question, and that their conversation generally related to their own inventions and sometimes to the inventions of others (ans. 73-4, p. 392).

He then testifies (p. 393) that during all those years and down to the end of 1877 he had never seen any electric speaking telephone made or purporting to be made by Drawbaugh, and Drawbaugh had never told him that he had made an electric speaking telephone.

During the Centennial year, 1876, the witness learned of the existence of Mr. Bell's telephones from the newspapers and heard of them also in the beginning of 1877. He is perfectly certain that if Drawbaugh, before he had heard of the existence of Bell's telephone, had ever disclosed to him or shown him a practically operative telephone, he would have prepared an application at once, whether the applicant could pay the fees or not. It hardly needs testimony to satisfy the Court that he or any other solicitor would have done so.

In the spring of 1876, witness was preparing to go into the busi-

ness of manufacturing axles, which up to that time had been a failing business under the Kline patent, though his negotiations ultimately fell through. He was in a position to find the means and credit for that business, and he says that if Drawbaugh had had a speaking telephone at that time and disclosed it to him, he would have aided him to take out a patent and to manufacture them.

Then the witness testified (p. 395) : —

"*Q.* 80. You know what your relations with him were during the years you have testified about, and how freely you and he conferred with each other. I wish to know whether your relations were or were not such that he could have had practically operative and successful electric speaking telephones during a considerable portion of those years, made by him before they were heard of elsewhere, and which he was disposed to show to his friends generally, without showing them or mentioning them to you?

"*A.* Under the circumstances to believe that such was the case is such a strain in the situation of men and things that it is incredible, if not impossible, to believe that he had such an invention reduced to practice, and shown it to so many others, and not have shown it or mentioned it to me."

It was hardly necessary for the witness to say that. It was a self-evident proposition, and yet the hypothesis in the question is only the repetition of what is alleged by Drawbaugh to have been his condition.

In the early part of 1878 Drawbaugh had sold an interest in his alleged magnetic clock invention to Grissinger and Shettel. Weaver did not know these gentlemen, but Drawbaugh brought them to him to take out a patent on the clock. The first application connected with it was filed May 27, 1878, as shown by an official paper. At that time Mr. Weaver, like every one else, had noticed the growth of the speaking telephone which had that spring been introduced into considerable extensive use in Harrisburg, and he had also shortly before seen the newspaper article already referred to, which contained the first mention of Drawbaugh's connection with the telephone as an improver (p. 397).

It is in the Harrisburg *Telegraph*, April 18, 1878, and is, —

"Daniel Drawbaugh of Eberly's Mills, the mention of whose wonderful clock was first made in the columns of the *Telegraph* some

time ago, is now engaged in the construction of a new telephone. If it is as great a success as the clock, Mr. Drawbaugh can be congratulated."

While preparing a long and elaborate application for a patent on the clock, Drawbaugh, referring to telephones and to a particular contrivance he had thought of, stated (p. 398) that

"he, too, had experimented on the electric telephone years ago, and before Bell came out with his invention, and that he had some results, but that they were not of such a satisfactory nature as to go ahead at the time with his experiments; that he had given up his experiments for the time being, and now it was too late for him to hope to have any standing as the inventor of the electric telephone; but that he had some results, and that he had experimented considerably, and had also experimented on the phonograph before Edison came out; and, since Edison came out, he had experimented further, using not only thin membranes as part of the means or as the diaphragm of the apparatus, but that he had also used pretty thick plates, and found that they answered as well, if not better, than thin diaphragms.

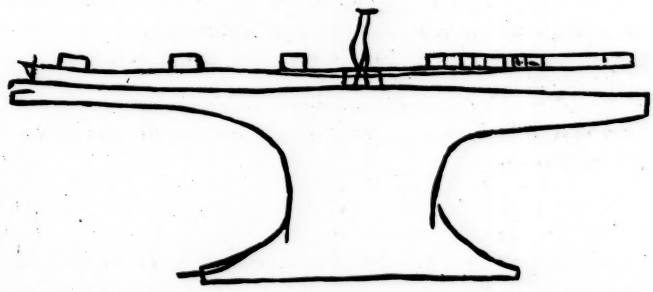
"*Q.* 91. Did he say anything about connecting the clock with a phonograph or telephone or acoustic instrument?

"*A.* Yes, sir; he did. I believe that was mainly his object in opening the conversation. He stated he had not yet constructed the apparatus, but he was about to construct it. The device, he said, was intended to increase the compass or loudness of the sound, and it was to be used in connection with either the phonograph or the telephone, and to be an attachment not only for his magnetic clock, but for clocks of other kinds than magnetic. The purpose of the device was to be to cause the clock to announce the hours vocally, instead of striking the hours as in the usual manner. He, at that time used a piece of the paper which I had lying on my table, on which I had sketched a part of the specification on one side. And he made a sketch in pencil, which he said would give me an idea of the device referred to. He said it was to operate on the principle of a vibratory long-arm lever, which, by having a vibratory touch given it some distance in from the end of the long-arm, would enhance the vibration of the end of the long-arm. He spoke to me on this wise, that he thought it was still patentable, and meant to make application on it for a patent. But that he did not feel inclined to let the Grissingers, or party who were partners in the clock, have a footing in that invention, unless they would come out fair and square on the clock first. He stated he had experimented somewhat on the device in question, and believed he had good results.

"*Q.* 92. Will you please produce the sketch referred to in your answer, as made by Mr. Drawbaugh on that occasion?

"*A.* This is the sketch.

"[*Witness produces sketch, which is put in evidence, and marked 'Complainants' Exhibit Drawbaugh-Weaver Sketch of* 1878.']



"*Q.* 93. Did the statements and assertions he then made to you make a distinct impression on your mind at that time as to whether Mr. Drawbaugh had, or had not, made a practically operative speaking telephone apparatus before Mr. Bell's invention was published? And if so, what was the impression it made on you in that respect?

"*A.* I can't say that it made any decided impression, except so far as it prompted me to make further inquiries how far he had gone in his experiments at that earlier time.

"*Q.* 94. Did you make further inquiries of him on that topic at that same interview?

"*A.* Yes, sir, I did.

"*Q.* 95. And what was the result on your mind, at the time of such inquiries, from the statements he made in response to them.

"*A.* I regarded his case as almost hopeless, if not altogether, even as a successful experimenter, as he gave me to understand he had nothing to show how far he had gone in his earlier experiments. What he had used before was detached, and could not be gathered together; besides, he did not appear to have reduced it to practical form. I then dismissed the subject from my mind, and I don't think we ever afterwards approached the subject when we came together; at least, not in an earnest way, or with a view to taking out a patent, or doing anything at all in the matter.

"*Q.* 96. If his statements had been such as to convey to your mind or leave upon your mind the impression that he had gone far enough, according to his own statements even, to be entitled to claim to be the first inventor of the speaking telephone, would you, or would you not, have followed up the matter with a view to taking out a patent, or doing something about it?

"*A.* I believe I would have followed up the matter without delay, and would have taken proper steps at least to make an appli-

cation for a patent on the invention. I came to this conclusion because I have taken an interest in others' patents before this, even at the risk of having an interference suit through it, when the case seemed to be a clear one."

P. 458. "*X Q.* 469. Have you testified to all that Drawbaugh said to you about the telephone at that interview?

"*A.* It is quite likely that there was more talk on the subject than I have embodied in my answers to questions.

"*X Q.* 470. State anything else that you remember that he said to you about telephones at that interview which you have not already testified to.

"*A.* It occurs to me that he stated that about the time that he gave up experimenting the country people had laughed at him a great deal, and made light of him; that he was getting beside himself, or something to that effect, to experiment on things of that kind, and that he had given it up, and hadn't done anything at it for a long while.

"*X Q.* 471. Have you now testified to all that you can remember that he said about telephones at that interview?

"*A.* I have given about the substance of it, only I remember we had some talk of what he had really done and accomplished, or rather, failed to accomplish. One thing I recollect, that the unappreciation of the country people was very great against him, he said. The impression left upon my mind was that what he had accomplished had come as a result after experimenting on the magnetic clock. I never heard him say that he had experimented on telephones before he had experimented on his magnetic clock. He left me under the impression that the experiments on the magnetic clock brought on the other experiments on telephones. At least, I never had knowledge that the opposite was the course of his experiments until I heard it afterwards from others."

P. 461. "*X Q.* 483. Referring now to that private interview, no one else being present, is your recollection of what took place at that interview very full, clear and distinct, or not?

"*A.* I cannot say that it is very full. The main parts were very impressive to me at the time, and I believe they are clear in my mind yet. I remember Mr. Drawbaugh's attitude very clearly as we talked about it. We were standing at a little work-table at the south end of my room or office, both standing, when he said it to me; and most of the conversations occurred right there, until, a little while after, we went over to the other end of my room, where my writing table is, and my library, and there he made the sketch which I have offered."

"*X Q.* 495. Now, will you please, from your unaided memory, set forth in the order in which it occurred all the conversation between you and Mr. Drawbaugh at that interview, on the subject of

telephones, to the fullest extent of your present recollection, and giving the exact words used, so far as you remember them?

"*A.* I cannot give his exact words, or mine either, at that time, only remembering here and there certain expressions. Mr. Drawbaugh did say, edging up to me as we stood at the table at the south end of my room, 'I, too, experimented on telephones.' 'Did you?' said I, 'when was that?' 'It was long ago. It was before Bell's telephone came out. I was at it a good deal, and I had some results, too. The country people made so much fun of it and me, I gave it up.' I made some inquiries then, what he might have done at that early period. The impression left on my mind by his words then was that he had begun experimenting to make a clock tell the hours audibly and loud without striking them in the usual way. I could not understand then, and never could since, how he could connect a telephone with a clock; but I understood from that conversation that his experiments were with temporary apparatus — something gotten up in a temporary way — that he had nothing to show on hand then like a speaking telephone by which he could prove that he had ever reduced it to practical form in those early experiments. He stated that his experiments, for whatever purpose in view he had, were not altogether satisfactory, but he had some results. I put it sharply to him, to see if he might have a chance to establish a claim as the first inventor of the telephone. He admitted it was too late; he had given up, and now it was too late, and he would not pretend now to put in a claim for it, but that he still thought that he could get valuable improvements patented. Then came up the main subject, why he came to me at that time; to consult me to take out a patent some time on something related to that sketch on file in my testimony. The impression left on my mind was, that he had obtained no good results from those early experiments, from the fact that the country people ridiculed him so much about it, as I thought then, that if he had obtained satisfactory results the country people would have applauded him; but I did not state that to him. He seemed to have gotten his mind off that subject of early experiments, and had attached no importance to it himself. Before making the sketch he stated that he had also experimented on something like the phonograph before Edison came out with his invention on it; that he had made various experiments to get good vibrations with plates or diaphragms. That is about all I can remember.

"*X Q.* 496. Have you now stated in your last answer all that Mr. Drawbaugh told you about the telephone at that interview?

"*A.* He stated the object of that last device, to which the sketch referred, was to improve the delivery of the sound in some way, to make it louder, and that it might be used in connection with a telephone, as well as with a phonograph, if I remember rightly. At any

rate, it was to improve the loudness of the clock's announcement of the hours, and before leaving, I believe he requested me to give him a cut or book to show the construction of the human ear, stating that he would like to study the drum of the ear; that is, the tympanum and the little bones near it inside. I searched my library in the dwelling house, and I found 'Hooker's Elementary Physiology,' which I gave him. It had a cut which pretty well illustrated the human ear, and he took it along. He never told me he had a telephone as such, — not before that time, nor at that time.

"*X Q* 497. Did you understand from his conversation at that interview that the only thing he had been working on in the nature of a telephone, up to that time, was the device which he had purposed to use in connection with the clocks?

"*A*. No, sir; not quite in that way, because he commenced talking about telephones first without reference to clocks, because he mentioned clocks in the after part of the conversation. I may only wrongly have inferred that, and got telephones and phonographs a little mixed in the after part of the conversation, for I know that he mentioned Bell's name in the first part.

"*X Q*. 498. Then you did, at the time, infer that the telephone which he had been working upon was to be used in connection with a clock, did you?

"*A*. In the after part of the conversation. It did not appear impossible, so far as I understood it then, and he talked of both in connection with his proposed improvement. That was a part I didn't fully understand.

"*X Q*. 499. What did not appear impossible, so far as you understood it then?

"*A*. That his improvement might be used with a telephone, and both with a clock, but how I could not understand.

"*X Q*. 500. Did he make any sketch or sketches to show how his telephone was constructed, except the sketch which you have put in evidence?

"*A*. No, sir; not that I recollect.

"*X Q*. 501. Did he tell you that he had been able to actually talk through his telephone, or been able to get words through it, so as to be distinctly heard and understood through the medium of electrical transmission?

"*A*. No, sir; it was only on reproducing some kinds of sound. Speech was not mentioned, except in connection with the new improvement.

"*X Q*. 502. What kind of sounds were those mentioned as reproduced, or intended to be reproduced, by it in its original form?

"*A*. The kind was not stated. Only to repeat sounds.

"*X Q*. 503. State just exactly what he said about that, as fully and clearly as you remember it.

"*A.* I think I have stated the exact words — 'to repeat sounds.' I am not positive. It is too long for me to remember the exact words.

"*X Q.* 504. Did he say they were to be transmitted or repeated by electricity?

"*A.* He didn't mention that. I took it for granted that he was experimenting by the aid of electricity.

"*X Q.* 505. Didn't you ask him whether he had ever transmitted speech by his apparatus?

"*A.* I did, when I asked him whether he had a practical working telephone. He said he had nothing to show now or then. That what he had used was only a temporary contrivance. I didn't put the question in the words of your question."

"*X Q.* 513. Did you ask him the direct question, whether he had any of his experimental machines that were made before this new improvement, or whether they were in existence?

"*A.* I think I did, only in reference to his earlier experiments. He had partly stated that matter already himself.

"*X Q.* 514. What had he said about it already himself? Give us as nearly as possible his words, if you can remember them.

"*A.* I have already stated, as near as I can recollect, that what he had used was a temporary apparatus, taken apart and put away, and he didn't know whether he could get it together again. It was only to try an experiment, he said. That is all I can recollect of it,

"*X Q.* 515. Did he say that he had given up his telephone experiments before Bell had entered the field, or afterwards?

"*A.* I understood it was before Mr. Bell came out with his telephone.

"*X Q.* 516. Was any mention made as to the time when Mr. Bell came out with his telephone?

"*A* I have no recollection of any particular date being mentioned.

"*X Q.* 517. Did he tell you how many different forms of telephones he had gotton up before he gave up his telephone experiments?

"*A.* No, sir; he only said he experimented a good deal.

"*X Q.* 518. Did he tell you whether he experimented on the magneto telephone or carbon telephone in those experiments of his?

"*A.* He didn't specify."

"*X Q.* 521. When you asked him about his telephone experiments, I understood you to say that you asked him only about his earlier experiments: is that so?

"*A.* Yes, sir; and up to the time of Bell's patent.

"*X Q.* 522. State exactly what question you did ask him on that point.

"*A.* I mainly let him talk. He opened the talk, and now and then I put in a word to get him to tell what he had done before. He told it pretty much all of his own accord. I wanted to know what he had done, and what shape he was in, to see if he could substantiate his claim as the prior inventor of the telephone.

"*X Q.* 523. Did he tell you when he first went to work at telephone experiments?

"*A.* No, sir; but it was long ago, he said.

"*X Q.* 524. Did you get the idea that it was about the time of Bell's patent, or several years before that time?

"*A.* I don't know how long before Bell's patent, but he said that his crude experiments were before Bell came out, — a good while before Bell came out.

"*X Q.* 525. Was the date of Bell's patent mentioned in that interview, or anything said about it?

"*A.* No, sir.

"*X Q.* 526. Did you at the time of that interview know the date of Bell's patent, or either of them?

"*A.* Only the one patent, the Centennial-year patent.

"*X Q.* 527. Did he state that he had given up his telephone experiments before the date of Bell's Centennial-year patent, or after it?

"*A.* Not in so many words, but so it was conveyed to my mind, that he gave up his experimenting before the Centennial year; but what was in Mr. Drawbaugh's mind I cannot tell. I supposed it was commonly understood that Bell came out publicly about the Centennial year.

"[*Last clause of the answer objected to by Mr. Hill as irresponsive, mere opinion and incompetent.*]

"*X Q.* 528. When he said that he had had some results in his earlier experiments, didn't you ask him what those results were?

"*A.* No, sir; he went on and stated them of his own accord.

"*X Q.* 529. Well, what were they, according to his statement?

"*A.* He said he had some results in reproducing sounds, only in a general way. He didn't particularly lay stress on what is now known as articulate sounds. He didn't mention speech or words. I didn't know but what they were musical sounds, as he didn't specify.

"*X Q.* 530. And you didn't ask him whether they were musical sounds or not?

"*A.* No, sir; I thought that was understood that the telephone was to deal with speech, but speech was not mentioned.

"*X Q.* 531. Did he use the expression — the words — that he

had given it up, or some other form of expression; and if so, what?

"*A.* That is what he said.

"*X Q.* 532. Did he state why he had given it up; if so, why?

"*A.* Both because it wasn't fairly practical or successful, and because he was ridiculed by the country people.

"*X Q.* 533. Give his language as closely as you can on that point.

"*A.* It is only a general impression I have clear, but it appears to me he said, 'I was much opposed and laughed at by the people. It wasn't altogether successful. I had some results when I gave it up, and now it is too late for me to hope to have any standing or any show. I didn't go far enough; but I still think I could get up some improvements on it. They haven't got it yet.'"

The drawing referred to, given above, is bound in complts, iv, exhibits, p. 363, being the upper one on that page; the lower one on that page is a rough copy of it made by the witness Weaver when on the stand, at the request of the defendants' counsel, and lettered for better explanation on cross-examination.

This story, told by Drawbaugh to Weaver in the spring of 1878, about the same time that he told the same story to Matthews, Grissinger and others (pp. 369, 371, *supra*, and p. 409, *infra*,) is not evidence for Drawbaugh. It is his own claim, made in his own behalf, to an invention which as Mr. Bell's invention had attracted great attention, and for a year had been meeting great commercial success, and was beginning to be assailed by many hungry claimants. His statements do not in law prove that he had done as much as he alleged then and at the very time alleged; indeed, under the circumstances, and considering the ordinary habits of inventors, they are not even morally persuasive that he had. But they conclusively *establish the limit beyond which he had not gone;* and that limit, as stated by him, excludes him, as he then in terms acknowledged that he knew it excluded him from asserting that he could stand as the inventor.

The defendants occupied a year in rebuttal and called two hundred witnesses, but they did not call Mr. Drawbaugh to deny this statement. His statement made to Weaver is substantially the same as the statements which he made to Grissinger and Matthews during the same spring of 1878, and anything different from this would be

inconsistent with the proof afforded by the newspaper publications of that spring. It is impossible to doubt the substantial correctness of this part of Weaver's testimony.

The importance the defendants attached to this deposition is shown by the cross-examination, which lasted seven long days.

The cross-examination began by insinuating that Mr. Weaver had been guilty of an unpardonable sin in speaking of himself as "counsel" in the Kline interference case, when he was not an attorney at law, but only a solicitor of patents, and because he had never carried entirely through an interference without having a more experienced fighting practitioner associated with him. That cross-examination immediately developed the fact that Mr. Hill, one of the discoverers of Drawbaugh, and at present counsel for the defence, was made known to Chellis, Drawbaugh and others by Mr. Weaver, who advised them to employ Mr. Hill as counsel to argue the faucet interference. Mr. Weaver's good judgment cannot be doubted.

The next few pages of the cross-examination was devoted to insinuating that Mr. Weaver was turned out of the faucet case; and that after being turned out of it, he proposed to disclose to the other side certain facts injurious to Drawbaugh which had come to his knowledge as attorney. He was not turned out of it, though certainly there was considerable coolness between himself and Mr. Chellis, for reasons which, as Mr. Weaver states them, were to his credit, and which Chellis is not called to deny.

It appears that, after the faucet interference had been argued before the examiner of interferences and Drawbaugh had gained at that point, David Hauck, the party on the other side, got the idea that Mr. Weaver, who was then out of the case, knew some specific fact about Drawbaugh's faucet invention which would be fatal to Drawbaugh if proved, and he asked Mr. Weaver to tell him what the fact was, and to make affidavit to it, in order that the case might be reopened. Mr. Weaver refused to tell him the fact, and though apparently he thought that circumstances were such that abstract justice required him to make the affidavit, he refused to do it, or to give any testimony unless summoned and legally compelled so to do. Mr. Chellis and Mr. Jacobs heard something of what was on foot, and got Mr. Weaver into Mr. Chellis's office, and apparently tried

to terrify him out of doing it. Evidently there was some fact known to Mr. Weaver which Chellis and Jacobs thought would be fatal to Drawbaugh. What it was has never been disclosed. We never asked him, and although he was cross-examined at great length about it, the Drawbaugh party carefully refrained from asking him what it was.

Reading Weaver's long cross-examination on this, it is apparent that the strongest that can be said is that, wavering between a sense of abstract justice and his supposed duty to a client who had willingly, at least, and according to the other side offensively severed relations with him, he finally came to the conclusion that he ought not to tell what he knew. If there is anything in his statement upon this cross-examination which is not in accordance with the facts, the other side could have proved it. Mr. Hauck was called by us as a witness, and they did not ask him a word about it. Mr. Chellis had been called by them as a witness, and he is one of the defendants. They did not call him in rebuttal, nor venture to expose him to cross-examination after they had first started this subject. Dr. Moffitt and Drawbaugh were the other two parties concerned in the faucet case. Both had been witnesses, but neither was recalled nor asked about this.

Then it appears that in July, 1880, Mr. Weaver had some business quarrel with Mr. Chellis. According to the answers given on his cross-examination, Mr. Chellis tried to play some tricks upon him, in a matter of business, and Mr. Weaver, naturally, undertook to defend himself in a business way. If the facts are otherwise, Mr. Chellis and others could have been called as witnesses to contradict him.

Part of that cross-examination is apparently an attempt to show personal hostility between Weaver and Chellis. According to Mr. Weaver's account, there appears to have been some feeling between them, and on his part very justifiably; but none between himself and Mr. Drawbaugh, or between himself and Dr. Moffitt. If it were otherwise, either of those persons could have been called to say so. But that quarrel with Chellis did not begin until the summer of 1880; the defendants or their assignors were investigating the telephone claim before that, and there cannot be a possible doubt, that if Mr.

Weaver had known, or if they had believed he had known anything about a talking machine, that they would have had his affidavit.

The next attack, which occupies a large part of the cross-examination of Mr. Weaver, was an attempt to show that he was unfaithful to his clients. Such an attempt against a witness who is engaged in business as a patent solicitor is scandalous unless thoroughly justified by the facts; and for this attack, in this case, there is not the slightest justification. Nothing but a desire to injure him because he testified against Drawbaugh could have prompted it. The insinuations put into the questions are that, from time to time, when persons brought inventions to Mr. Weaver to patent, he properly and fairly took out patents on all they disclosed to him, and, from time to time, being himself an inventor, and known as an inventor, would make improvements additional to his clients' inventions, but on the same subject matter, and generally sell them to his clients for very small sums. Whether a patent solicitor fancies that line of conduct or not, there is nothing immoral or unlawful in it. In the case of a man who is not only a patent solicitor, but is *known as an inventor, resorted to partly for that reason, and constantly requested by his clients to improve upon their inventions*, it was a line of action which was to be expected, and was generally desired by the clients. Finally we proved in instance after instance that what he did in that respect was entirely satisfactory to his clients, and approved by them, and that they were perfectly satisfied with him. They first assaulted him on a subject of this kind about Dr. Moffitt, and it presently appeared that long after the alleged action by him, Dr. Moffitt continued to employ him as patent solicitor; the last patent being taken out for Dr. Moffitt during the progress of this case, and six months after Dr. Moffitt had testified for the defendants. (See pp. 383, 389, 401, 420, 422, 424, 495.) The defendants have not called Dr. Moffitt again. There is, therefore, an end of that allegation.

Then a similar assault was made with reference to one Henry Brady (pp. 431, 487). Mr. Weaver's cross-examination left that in a perfectly satisfactory manner; but, in addition to that, we took the depositions of

No. 98. *C. H. Brady*, complts, ii, 1571.—Brady testified that everything that Mr. Weaver did for him was entirely satisfactory to

him; that their relations were and had since continued to be perfectly friendly.

No. 60. *J. W. Anderson*, complts, ii, 1086. — Another client of Mr. Weaver's, with relation to whom a similar assault was made, was Anderson or the Anderson Carriage Company (pp. 422, 424, 495). Mr. Weaver took out many patents for them on jump seats for carriages; made some improvements of his own which he sold to them; continued to take out patents for them long afterwards, and at the time he testified had an application pending for them. The complainants called Mr. Anderson, who gave a list of the patents which Mr. Weaver had taken out for them, stated that they still continued to employ him; that they bought of him one of his own patented inventions on jump seats; that they were well satisfied with it; that they would not take three times what they paid for it; that they had recently published five thousand copies of a circular which described Weaver's invention as the best improvement they had, and that they were entirely satisfied with Mr. Weaver's conduct, character, and dealings with them.

No. 74. *J. Singer*, complts, ii, 1209. — Another somewhat milder attack was made with reference to Mr. Singer. While the deposition was going on Chellis went to Singer to see if he could get something to use against Weaver. Singer, who is a furniture dealer and manufacturer in Harrisburg, spoke, on the contrary, very highly of Weaver to Chellis, which did not in the least deter Chellis's party from continuing the unfounded assaults. Singer, called by us as a witness, spoke extremely well of Mr. Weaver's character and conduct.

Kutz. — An attack was made upon Mr. Weaver on the subject of his relations with one Kutz (pp. 432, 440 and 488). The assertions put into the questions were that Kutz employed Weaver to take out a patent; that Weaver and Kutz afterwards made a joint invention, and swore to a joint application; that then Weaver wickedly and surreptitiously suppressed the joint application, and filed a single one in his own name for the same invention; that one George H. Irwin, a lawyer at Harrisburg, as attorney for Kutz, instituted, or threatened to institute proceedings in the nature of a charge for perjury against Weaver, unless he would assign a part interest in

that patent to Kutz, and that Weaver thereupon did so in order to escape prosecution.

This story was not only denied by Weaver, but absolutely disproved by the production of all the papers. The facts are that Kutz and another had an application pending under the charge of Munn & Co., and it had been rejected. He came to Weaver to get his patent through, and Weaver got the patent April 15, 1873, and was paid. The invention related to sulky ploughs. It was found to be inoperative on hilly ground. Kutz asked Weaver if he could change the attachment so as to make it work on hilly ground. Weaver said he would study the matter and see if he could. He invented an improvement that overcame the difficulty, made a sketch of it, and showed it to Kutz. They agreed that he should take out a patent: that towards the time, trouble, expenses and patent fees Kutz should pay twenty-one dollars, and that he should own half of the patent, and Weaver the other half. Weaver drew the application, and then Kutz insisted that he also ought to swear to it as joint inventor. Weaver objected to this because he said it would invalidate the patent, as Kutz was not a joint inventor; but Kutz overcame his views, and they did swear to a joint application. The bargain of division having already been made, it was pecuniarily immaterial to Weaver whether the application was joint or single. After it was sworn to, Weaver became more satisfied that no such application could honestly be presented. He therefore drew another one for himself alone, swore to it, and sent it to the Patent Office, *informing Kutz of what he had done.* Kutz finally agreed that the action was proper, and desired him to build a plough according to the invention, promising to pay half of the cost. Weaver did so, and before trying it said to Kutz that he must pay his half before it was tried and run his risk, or else give up all claim to it. Kutz would not agree to either, but the patent had been allowed and Weaver finally had it issue.

Upon re-direct examination, all the papers relating to the case were put in, and the following appears from them: The joint application was sworn to June 14, 1873; the individual application on June 28, 1873. June 4, 1873, that is before the first application was made, Kutz took a receipt from Weaver for sixteen dollars, stat-

ing that the invention was "worked up" by Weaver, and that for the money named and the final fee, Weaver agreed to assign an undivided half interest in the patent (p. 489).

July 9, after the second application had been filed, Weaver made another paper, stating that, whereas the application had been divided, he agreed, in consideration of five dollars paid him, to assign to Kutz a half of the second patent to issue on the division, — both of these papers recognizing the fact that Weaver was the sole inventor and applicant, and Kutz a joint owner only as assignee. These papers were recorded by Kutz, Dec. 21, 1874 (see papers, pp. 489 to 490). *After* that, and by a letter of Jan. 1, 1875, dated accidentally 1874, but proved to be of 1875 (p. 488), Irwin, as attorney for Kutz, wrote to Mr. Weaver a civil letter, stating that Mr. Kutz *possessed already* an interest in the plough *under a recorded contract* between Weaver and Kutz; saying that he would like to see Weaver, hoping to arrange the matter satisfactorily.

So far, then, from Kutz threatening prosecution for perjury against Weaver for signing the application as sole inventor, and thereby compelling Weaver to execute an assignment, Kutz had recognized Weaver as the sole inventor, had actually taken a contract for a half interest to himself as assignee, had recorded it, and had employed Irwin to ask Weaver to execute an assignment in accordance with the recorded contract; Weaver's sole reason for not doing it was that Kutz had not paid the expenses which he agreed to pay.

Finally it appears that Mr. Kutz is a very disreputable kind of an individual. He is or had been a clergyman, but he had a previous partner in patent matters, and after Mr. Irwin's letter was received by Mr. Weaver, Mr. Weaver wrote to Kutz's former partner, Stockstill, and received the following characteristic letter (p. 490): —

"JANUARY 20, 1875.

THEO. WEAVER:

Dear Sir, — Yours of the 11th inst. is received, and you ask how Kutz and I stand. I suppose you mean financially, if so, will say he owes me some money, honestly. If you mean as friends, will say he owes me apologies, honestly; neither of which do I expect he will render. Secondly, you ask are we partners. I am paying no attention to him as being anything to me; consider him a failure.

Thirdly, "is he" (Kutz) "inventor with you?" (me). Not in the least; became so only by virtue of his *oath*.

Fourthly. "Did he act honorably by you?" (me). The above will answer.

Yours, etc.,

S. L. STOCKSTILL."

It is pretty natural to believe that such a creature as Kutz would not be called to contradict Mr. Weaver after that, and he was not.

Nebinger.—An insinuation was put into some cross-interrogatories by defendants' counsel that Mr. Weaver had collected $500 belonging to one Nebinger and had not paid him, and had had trouble about it (pp. 485, 493). Mr. Weaver says that he sold a patent in which he and Nebinger were interested. Nebinger heard that he had received considerable money, and asked him for half of it. Mr. Weaver satisfied him that it had been sold for a very little, settled with him, and he produces the receipt of settlement in full for $5.00. That transaction was in 1874. Mr. Weaver also produces a letter of 1877 from Nebinger to him of the most friendly character, proposing to hold more business relations between them with reference to patents (p. 493). Nebinger is dead.

An assault was made upon him (by insinuations in the questions merely) on the subject of Hamilton Bailey's patents on dumping wagons. Mr. Weaver took out several for Mr. Bailey, and then made some improvements on them which he sold to Bailey in 1875. Mr. Bailey was not called by the other side, but it was proved by Mr. Weaver that he continued to do business for him, and had taken out three patents for him after the transaction in queston, — these patents being in 1875, 1877 and 1878. Weaver states the dates and numbers and the records could contradict him if the fact were otherwise (p. 494).

Then they undertook to assert that Mr. Weaver had been of counsel for the complainants. It turns that when Mr. Weeks was sent to Harrisburg by the complainants in the early fall of 1880 to investigate the Drawbaugh pretensions, he was directed to Weaver as a person who had long known Drawbaugh and could give him some information. He saw Weaver several times and found out what he knew, and at his request Weaver went to three or four persons he was acquainted with, who were supposed to have knowledge on the

subject, to ascertain what they knew, and in two or three cases put their knowledge into the form of affidavits, which, under the supervision and direction of Mr. Weeks, were sworn to, and most or all of them filed in the case on the motion for a preliminary injunction. This was not lawyer's work, but it was, as Mr. Weaver correctly describes it, merely the work of a citizen. For his time and trouble in this matter, and in going to some record office to look up the records, he was paid sixty dollars. He was not retained; had nothing to do with the preparation of the case; never made any affidavit, and did nothing except just what has been stated. The defendants did what they could not have done if Mr. Weaver had been attorney or counsel; asked him for all his correspondence with Mr. Weeks. Mr. Weaver produced it, and it is printed on pp. 479 and 480. It covers a period of about three weeks only, and he did no work after that.

The defendants' practice in this respect is not so careful. Their only expert, Mr. Benjamin, is their patent solicitor and attorney of record at the Patent Office (see the papers, complts, iii, rejoinder, 2172). They called one of their counsel, Mr. Melville Church, and their witness hunter, W. K. Fenn, to swear to what (they alleged) was said to them by our witness, G. W. Kissinger, in answer to questions put by them at an interview which they travelled two hundred miles to obtain. Their witness, Shank, has been employed by them for three years in the preparation of their case; so for a less time have O. H. Miller, H. F. Drawbaugh, W. D. Shoop, and others of their witnesses.

One statement drawn from Mr. Weaver on his cross-examination is important for the complainants (complts, i, 448): —

"*X Q.* 409. When you interviewed Mr. Jacob Kline and Mr. J. A. Moore, at Camp Hill, as you have testified, did you represent to those gentlemen, or either of them, that you called upon them as a friend of Daniel Drawbaugh?

"*A.* I don't know that that question was asked me by Capt. Moore, or whether I said anything to him about it. Mr. Kline pressed me by questions to find out on which side I was, and as *he didn't appear to know anything of importance about the matter in controversy*, I think I didn't fairly tell him on which side I was, but meant to fairly tell him in case he had knowledge, or to the effect that his knowledge might be used against Drawbaugh."

The importance of this is that Mr. Kline was the patentee and a member of the Axle Company, father-in-law of Capt. Moore, and father-in-law of Henry M. Bowman, justice of the peace, who was employed extensively by the defendants to take affidavits in the case, and called by them as a witness about an alleged affidavit. If Kline had known anything about a speaking telephone, the other side would have called him. Here it was drawn out on cross-examination by them, and by an answer which they did not object to, that Mr. Kline *did not appear to know anything of importance about the matter in controversy*. The defendants left it there and did not call him, and offered no excuse for not calling him; and we are entirely content to leave Kline in that position.

Mr. Weaver stated that his ordinary charge for taking out a patent was $20 attorney fee, and the $35 government fees, making $55. This, then, is the price for which one of Mr. Drawbaugh's rather intimate friends, a patent solicitor, would have been ready to take out a patent on a speaking telephone; and Drawbaugh's "practically operative instruments," if he had any, would have been sufficient for model, or he could in a couple of days have made another set, if he had one to go by. This agrees with Drawbaugh's own statement in the Faucet Company interference case (complts, iv, exhibits, 142).

"*X Q.* 102. What is the actual cost of procuring an ordinary patent, including attorney's fees?

"*A.* I have paid as high as sixty-five dollars or seventy dollars."

A minimum of fifty-five dollars, and a maximum of seventy dollars would, therefore, according to his own story, have procured a patent for him. According to Mr. Weaver's statement, — which nobody can doubt, — he could have got Weaver to have taken one for him, on such an invention, entirely on credit, or at most on advancing government fees.

The remaining part of the cross-examination chiefly relates to the interview of the spring of 1878. Mr. Weaver produced a sketch made by Drawbaugh. Weaver states that it was made on the back of the sheets of his first draft of the clock application which he was making in May, 1878, and that afterwards he cut off the part of the sheet which contained it and laid it one side with a lot of other sketches. One side of the paper now has some language, copied into

the record (p. 463), which is evidently a part of the clock application, as Mr. Weaver testifies. Mr. Weaver does not have such a perfectly clear, distinct, accurate knowledge of what is rudely shown in this sketch as to specifically describe with certainty all its parts and the functions of each. But his general idea appears to be correct, and the instrument shown is shaped like G and O.

That Drawbaugh did have such an interview, did make such a sketch and some statement of that character, is proved by the production of the paper itself. And as Drawbaugh declines to come on the stand to contradict Mr. Weaver's statement and to be cross-examined about it, it must be taken to be substantially true as Weaver states it on p. 391, *supra*.

Mr. Weaver (x-ans. 590, p. 477) refers to the fact that during the taking of Drawbaugh's testimony in the faucet case, he produced a certain pass book *containing a sketch relating to telephones and phonographs*. Drawbaugh's deposition in the faucet case so states (complts, iv, exhibits, pp. 100, 150, and p. 345, *supra*). It has not been produced in this case.

Here, then, is the substance of Mr. Weaver's deposition. His own position and his relations to Mr. Drawbaugh from 1867 to 1878 were such that if Mr. Drawbaugh at any time had had an electric speaking telephone before such things became known in the world, he would have shown it to Mr. Weaver as a friend, applied to him as his solicitor to take a patent on it, and would have had the application made without the slightest difficulty and on credit, if he had no means. He did nothing of the kind, and Mr. Weaver never heard that any such thing existed in Drawbaugh's shop. The first communication Mr. Drawbaugh ever made to Mr. Weaver on the subject was in the beginning of 1878, when he told him in substance that he had long ago experimented trying to make a speaking telephone, but could not make one, and knew that he could not have any standing to antedate Bell, because, whatever his early experiments may have been and whatever the date was they did not go far enough.

That is Mr. Weaver's testimony. The essential facts of it, and all of it, except the statement of the conversations of 1878, are proved, either by record evidence, or by Drawbaugh's own admissions on the witness stand; and after this story has been fully and

elaborately told, and Mr. Weaver has been cross-examined as to what he knew about it, Drawbaugh declines to come upon the witness stand either to deny it or to submit to cross examination about it.

It is the same story which he told to Grissinger (p. 403, *infra*); it is the same which he told to Matthews, and which Matthews perpetuated in print (p. 372, *supra*).

No. 17. *Theodore Grissinger*, comptls, i, 511, is the next witness of this class. Age, 37; lives at Mechanicsburg. He has been a dealer in agricultural implements, and has taken out patents on his own inventions. In 1869 he employed Drawbaugh to make him a machine for cutting and rounding leashes for leather fly nets. Drawbaugh made the machine and the witness paid him $40 for it (p. 512).

In the early part of 1878, he and his brother, Jacob Grissinger, his brother-in-law, Jacob E. Shettel, and Mr. Drawbaugh, formed a quasi partnership, called the "Clock Company," for manufacturing Drawbaugh's electric clocks. This witness, therefore, is a man who had known Drawbaugh since 1869, who then resorted to him as an ingenious machinist, who was disposed to interest himself in patents, and who, in 1878, did become interested in Drawbaugh's magnetic clock. He was a man to whom Drawbaugh would be likely enough to disclose a speaking machine if he had one.

The more important part of his testimony consists in his statement of the condition of things and of the statements made to him by Drawbaugh in the spring of 1878, about the same time as the interviews of Drawbaugh with Matthews, H. R. Musser, Rockafellow, Weaver, and with the various newspaper writers.

In the spring or summer of 1878, while at Drawbaugh's shop, in connection with the operations of the Clock Company, the witness, having known about speaking telephones from the newspapers, particularly the *Scientific American*, to which he was a subscriber, while speaking, one day, of Drawbaugh's inventions, asked Drawbaugh, jestingly, why he had not invented the telephone, saying that it would have paid better than the electric clock; to which Drawbaugh said that he had done something in that way (p. 513).

Witness asked him what he had done, thinking, he says, that it was a good thing if he had invented the telephone, and if he had done it far enough back, witness says he would have gone in with him. In reply to that inquiry Drawbaugh could show nothing, nor give any dates for what he had done. The witness says that if Drawbaugh had shown anything tangible, or any dates, "I would have examined the matter more closely; I would have investigated the matter to ascertain whether he had done anything far enough back to sustain a claim of priority of invention." On p. 512, he says: —

"*Q.* 13. At the time of that conversation, had you, or had you not, read about telephones in the newspapers, and what newspapers were you in the habit of reading?

"*A.* I had heard of them. I was a subscriber to the *Scientific American.*

"*Q.* 14. Did you make any inquiries of Mr. Drawbaugh, or remarks to him, with relation to telephones at that interview; and, if so, state the nature of the first inquiry or remark you addressed to him on that subject?

"*A.* I did. I asked him why he had not invented the telephone, saying, in a jesting way, that it would have paid better than electric clocks.

"*Q.* 15. Did he make any reply to that inquiry, and, if so, what?

"*A.* He did. He said he had done something in that way.

"*Q.* 16. Did that lead to any further inquiry by you? If so, please state it.

"*A.* It did. I asked him what he had done.

"*Q.* 17. What led you to make further inquiry about it? What did you want to ascertain?

"*A.* I thought it was a pretty good thing, if he had invented the telephone. If he had done enough, far enough back, I would have went in with him.

"*Q.* 18. If, in reply to your inquiry, he made any statement as to what he had done far enough back, or as to whether he had anything to show that he had done something in that way, please state what he said.

"*A.* He said, — he told different things he had done, but could show nothing, nor give any dates for what he had done.

"*Q.* 19. If he had shown you anything tangible, or given you any dates, would you have taken any action thereupon, or would your action have been influenced thereby?

"*A.* It certainly would.

"*Q.* 20. In what respects would your action have been influenced?

"*A.* I would have examined the matter more closely. I would have investigated the matter to ascertain whether he had done anything far enough back to sustain a claim of priority of invention.

"*Q.* 21. Please state whether or not the statements he then made to you left a distinct impression on your mind as to whether he had or had not done enough far enough back to entitle him to claim the invention.

"*A.* It did.

"*Q.* 22. State what impression it made on your mind at the time in that respect.

"*A.* I was entirely satisfied from what he told me that he had no claim.

"*Q.* 23. Did he or did he not at that interview claim that he was entitled to be considered as the first inventor of the telephone?

"*A.* He didn't claim to be."

The statements which Drawbaugh then made left a distinct impression upon the mind of the witness. "I was entirely satisfied from what he told me, that he had no claim"; he did not claim to be the first inventor of the telephone.

Drawbaugh once brought a telephone, something like D, to the witness's store at Mechanicsburg, and the witness had seen it previously at the shop on a bench. But he never talked through a pair at Drawbaugh's shop, and never knew of a pair connected up there until during the latter part of the time of the operations of the Clock Company. The witness understood that Drawbaugh was then making improvements.

At the interview referred to, which, it will be remembered, was *after* April, 1878, Drawbaugh said that he had had a line running from his shop to his house, and that he had tried to transmit speech over it, and could, by speaking very loud, hear a noise, but could not understand anything.

There are only four statements in the whole record indicating or suggesting a line from Drawbaugh's shop to his house.

This witness was informed of such a line in the spring of 1878.

Urias R. Nichols told Col. Maish that Drawbaugh had said he had such a line, and it was already proved that this was in the spring of 1878 (see dep. of Col. Maish, complts, i, p. 742, and U. R. Nichols, p. 32, *supra*). This has a significant bearing on the date of the alleged

visit of Orlando Kahney and Basehore (Nos. 19, 38, in defendants' surrebuttal, pp. 116, 224), because, if Basehore's testimony means anything, it means that at the time of the alleged visit of Kahney and Basehore there was a line from the shop to his house.

We are not disposed to believe without some positive evidence that such a line ever existed; but all the evidence on that subject is from these four witnesses we have named and Jacob Evans, who testified (complts, ii, 984) that about Christmas, 1877, he saw a line running out from the shop up over the hill, though he does not say where it went to.

Mr. Grissinger says that, although constantly at the shop during the time of the Clock Company, he never saw H or J or P.

His cross-examination, which was rather lengthy, did not change the character of his deposition. His knowledge was not absolutely perfect as to all details, of course, but the main parts of his testimony are improved by the cross-examination. In answer to one inquiry, the witness says, explicitly (p. 519, x-ans. 78): —

"My object was to know or find out whether he had done anything far enough back to sustain a claim of priority of invention,"

and that the time covered by his inquiries was that (ans. 82, p. 520) of "any of his earlier experiments, anything that he had done up until the time of these improvements." Witness's impression, from the statements made, was that his so-called improvements were quite recent, and that he had accomplished nothing in any earlier work, and had nothing to show for it.

P. 521. "*X Ans.* 92. The improvements referred to he claimed were improvements on the Bell telephone, and made since the patent was granted to Bell, and, consequently, could not have been going on five or six years. I can't make myself any plainer."

The witness does not pretend to repeat exact words, but the substance of his deposition on this point is that, making the inquiry with a view of taking an interest with Drawbaugh, if Drawbaugh had done anything which would give him an early claim on the telephone, he was satisfied, *from Drawbaugh's statements*, that while Drawbaugh claimed to have tried something pretty early, he had accomplished nothing, and had nothing to show for it, and that his only work on the telephone which was worth speaking of rested in recently made improve-

ments. This is precisely the tenor of the newspaper articles of April and May as to what Drawbaugh was then doing, and of the newspaper article of Mr. Matthews, resulting from his visit of the the same period, as to what Drawbaugh told him he had previously failed to do, and just what Drawbaugh told Weaver about the same time.

During all this time of the Clock Company, the witness was there (p. 526) on an average about twice a week. The defendants, as usual (p. 538), undertook to put into their questions insinuations that the witness had a quarrel with Mr. Drawbaugh, which was not the fact at all; the witness entirely denies it, and Mr. Drawbaugh does not dare to come on the stand to contradict the witness.

No. 55. *R. B. Ziegler*, complts, ii, 1025. — Mr. Ziegler is, and for many years has been principal operator in the office of the Western Union Telegraph Company at Harrisburg. The telephone business was carried on in the same office in 1878 and 1879. He testifies that the Harrisburg Car Company had a private telegraph line between different parts of their works ever since 1872; that Phelps's printing instruments were at one time used on it, and were not satisfactory, probably from the want of skill of the clerks who used them. Then they put in Morse instruments, and there was still trouble in the office because the clerks were unskilful. Among others Mr. W. J. Stees, superintendent of the car company's saw mill, wanted to use the Morse instrument, and tried to learn, but had to give it up.

When telephones were first introduced in Harrisburg, early in 1878, they were furnished by the Western Union to be placed on that line. One of the Phelps instruments, which is known as the "snuff-box form," was put in. It has the mouthpiece not in the centre, but near the edge, something like A.

Late in the spring or early in the summer of 1878 Mr. Stees came to the telephone and telegraph office with Mr. Drawbaugh and introduced him, — witness not having known him before. Witness had recently seen Mr. Drawbaugh's name in the papers at Harrisburg in connection with the exhibition of his electric clock which was

advertised in May, 1878. Witness thinks that the interview with Drawbaugh was while the clock was on exhibition, or soon after. Mr. Drawbaugh came in and said he would like to see one of the company's telephones. Witness showed him a Phelps snuff-box instrument. He asked to be allowed to see the inside. Witness opened it for him. And then this took place (complts, ii, 1028): —

"*A.* 27. He looked at it a moment or so, and with a significant shake of his head said, as near as I can recollect, 'Mine will not do; it is too much like that.'"

When the remarkable resemblance between Drawbaugh's instrument A and Phelps's snuff-box is noticed no one could doubt that he was quite right in saying that his was too much like that. But is it conceivable that a man who had had a practically operative speaking telephone for ten years before they were first known in the community should make that remark, not that they had copied his, but that his was too much like those in use?

A week or two after that Drawbaugh brought a telephone to Mr. Clute, the Western Union and telephone manager, to examine. Mr. Clute was not in and he left it. The instrument was A. It remained there a number of days, perhaps a week, and was then taken away. Witness has not seen it since, until the testimony in this case began.

Mr. Drawbaugh did not venture to go on the stand to contradict any of this testimony. Since it must be taken as true that Exhibit A was the instrument which Drawbaugh brought to Harrisburg to show to the telephone manager, after an introduction by Mr. Stees, it cannot be doubted that A was, in his opinion, the best one he had at that time. It exactly agrees with our idea that A was about the best one he had at that time. He was then, we insist, just beginning to make carbon telephones, which Edison and Berliner had invented the year before and which had attracted public attention (complts, iv, exhibits, 433–454). It was experiments in this line, — the construction of a "new" telephone that gave rise to the newspaper paragraphs about Drawbaugh in the spring of 1878 (quoted on p. 369, *supra*). According to the defendants' chronological schedule A was the first instrument which could be called well made, and if that was

the instrument he was showing as his best in 1878, there is an end of their case. If he had had a carbon telephone such as G or O finished at that time, he would certainly have taken that to Harrisburg, because it would have been in the line of novelties.

It is to be noted in connection with this, that the witness, U. R. Nichols, who swore that Drawbaugh showed him A and told him he had had it for about sixty days, and who gives us the impression that it was the best one Drawbaugh had, really had that interview with Drawbaugh and heard that from him some time in the first half of 1878 (v. p. 32, *supra*). This agrees exactly with the testimony of Ziegler as to the instrument which Drawbaugh exhibited. Mr. Ziegler cannot be mistaken, for he never saw any other instrument made by Drawbaugh.

This witness, chiefly upon his cross-examination, establishes another fact, which is, that Mr. Stees was quite a friend of Drawbaugh's, and as superintendent of the sawmill of the Harrisburg Car Works, had in his control a line of half a mile or a mile in length, and could at any time have tried telephones on it. Drawbaugh had merely to put a pair in his pocket when he came over to Harrisburg at any time during the ten years before Bell's patents and have them tried — if he had any; but there is no pretence that he did so. His own explicit testimony is that he never took one to Mr. Stees until 1878 (defts, ii, pp. 1047–9 and p. 345, *supra*).

This witness was cross-examined about Mr. Stees, and it turned out that Mr. Stees was particularly desirous to have a telephone in all these years, for, as has already been stated, he was using a telegraph line which he had found great difficulty in employing, because neither he nor his clerks were good operators, and the telephone was exactly what he wanted.

He was an old friend of Drawbaugh's, familiar with his work. He had been for a long time wanting something like a speaking telephone. When telephones were introduced, as a consequence of Mr. Bell's invention, he was the first man in Harrisburg to use them. Ziegler so testifies, and the newspaper reports of March, 1878, so state (complts, iv, exhibits, p. 412). He never used Drawbaugh's. Drawbaugh never carried him one, even to try, until some months after that. This witness was cross-examined so much about Mr.

Stees, that we asked him a few more questions on redirect, in answer to which he testified that after the telephone had been introduced into Harrisburg, that is, after the beginning of 1878, Mr. Stees said that Drawbaugh was getting up a telephone, and used language something like the following (complts, ii, 1035): —

"Never mind, old Dan Drawbaugh *is getting up* a telephone that will beat yours."

This undoubtedly expresses exactly Drawbaugh's hopes, for we know from the newspapers that *at that time* he was getting up a new telephone which he claimed would be better than those in common use; but if Drawbaugh's story had been what he pretends, Stees would have said, "Drawbaugh has had for ten years a machine which beats yours"; not that "he is getting up one."

Mr. Stees is dead; was killed by a railroad accident while we were taking testimony in this case at Harrisburg. But nothing that he could say would add to the case. Drawbaugh does not pretend that he ever applied to him for assistance, or that he ever had him at his shop, or still more, that he ever took his instruments there to try on Mr. Stees's line, or gratified the wants of his friend, who would have taken the telephone the instant it was offered to him, and who *did take it the instant it was offered to him in* 1878 *as a consequence of Mr. Bell's invention.*

No. 68. *Joseph Wert*, complts, ii, 1176. — He was employed in the telegraph and telephone office at the same time as Mr. Ziegler. He saw Drawbaugh showing the instrument to Mr. Ziegler and that fixes his date, because it was never done but once. Drawbaugh himself admits on cross-examination that he took one there about that time.

Mr. Wert testifies positively that upon that occasion Drawbaugh borrowed of the telephone company a magneto instrument of the style known as the Phelps crown, took it over to the shop, kept it a week or two and sent it back. No one who has seen the Phelps crown can fail to observe the resemblance between that and M and some other instruments of that class produced by Drawbaugh. The outward form and shape are different, undoubtedly, but they both of them have large horseshoe magnets, bent up so as to make it occupy a small space. It is not a useful plan.

No. 23. *Rufus E. Shapley*, complts, i, 587. — Jeweller and watchmaker at Mechanicsburg, in Cumberland County. In 1876 he formed the acquaintance of Drawbaugh. Drawbaugh was then living in Mechanicsburg, and brought his electric clock to the attention of Mr. Shapley. Drawbaugh on his cross-examination (defts, ii, 996) testified that he had known Mr. Shapley at a pretty early time, and that they had occasionally met and talked about inventions, and that Mr. Shapley was several times at his shop.

Drawbaugh testifies (defts, ii, 953) that in 1876, while in Mechanicsburg, he and Mr. Shapley entered into negotiations about the clock. Mr. Shapley had two thousand dollars which he was ready to invest in some invention, and they made an agreement that Mr. Shapley was to furnish the money for a patent, and have a half interest in it; it was expected also that Mr. Shapley was to supply some money for manufacturing. (See Shapley's deposition, complts, i, 592, which contains the paper, dated Nov. 8, 1876.) Shapley gave him twenty dollars the same day for his convenience.

After that Drawbaugh carried his magnetic clock to Mr. Shapley's shop in Mechanicsburg, set it up, and it ran there several months. Mr. Shapley built one like it to try, but found, as everybody else found with such clocks, that it would not keep time, and after considerable trial of it, he did nothing more. Drawbaugh finally sold the alleged clock invention to Shettle and the Grissingers, but did not take the trouble to inform Mr. Shapley beforehand that he was going to sell to others. Mr. Shapley says that he was not disposed to complain after he had found out what the clock was. Apparently Drawbaugh thought that he himself had not behaved well, for he testified (defts, ii, 1101) : —

"*Q.* 1660. Have you and Mr. Shapley been on friendly terms since the clock company was started?

"*A.* When we meet, we speak, but I don't think he thinks as much of me as he did at one time; by his manner, when we meet, I would think he didn't think very much of me."

But there is no proof of any hostile feeling.

Before making the contract, Shapley, with his brother-in-law, Mr. I. D. Landis, went to Drawbaugh's shop to see the clock. Drawbaugh (defts, ii, 996) testifies to the fact of the visit. While

there, they went into Drawbaugh's office to see the clock, and Drawbaugh showed them a number of his other inventions, — several bells which were rung by electricity; an alphabet, or dial telegraph; a magneto key, and an instrument called a telephone (Shapley, complts, i, 599), which the witness identifies as B. Does not remember seeing any other telephones. No one contradicts this, and Drawbaugh does not pretend that he ever showed him any others. This visit was in October, 1876. Mr. Shapley visited the shop several times afterwards.

After this visit of October, 1876, Mr. Shapley, who took the *Scientific American*, one day showed to Drawbaugh Dr. Van der Weyde's description of the musical and non-speaking Reis telephone contained in the *Scientific American* for March 7, 1876, saying that it was something of the nature of what Drawbaugh was then working on. Drawbaugh retained this newspaper and produced it on his cross-examination (p. 1104). Drawbaugh says that the article might have been six months old when Shapley gave it to him (defts, ii, 1101, ans. 1659). He also testifies (p. 1094): —

"I got a knowledge of that machine [the Reis] from Mr. Shapley, at Mechanicsburg, during the time I lived at Mechanicsburg; he gave me a copy of the *Scientific American*, that had an illustration and description of it in, and told me that was something of the nature of the machine I was working at then."

Mr. Shapley's means and disposition in 1876 were testified to by Drawbaugh (defts, ii, 953).

Speaking of the clock, Drawbaugh says: "He" [Shapley] "said he had $2,000 he would invest in it," . . . "he said he would go into the business and put $2,000 into it."

And Shapleigh was so much in earnest that he built one clock.

Thus the absolute facts, admitted, and, indeed, almost proved by Drawbaugh himself are, that Shapley had $2,000 idle money which he was disposed to embark in some invention. He knew in October, 1876, that Drawbaugh was "then working at" what he called a telephone. They talked about the subject and Shapley gave him a publication on it. If the claimant's story be true he had D and E for eighteen months. He could have shown them to Shapley at the shop during some of his several visits. He could

have carried them in his pocket to Shapley any night on his way home, and used them in Shapley's store, for they required no battery. And yet he never showed anything except B, never tried to talk through any with Shapley, never asked him for assistance or to take an interest in it. It is impossible to believe that he then had a practical instrument or that he believed that he was the first inventor.

There is no conflict of testimony on this subject; indeed, there could be none; for if D and E had been shown to a man of such means and intelligence as Mr. Shapley, in October, 1876, Drawbaugh's whole history since then would have been changed. And if he had had them he would have shown them.

Drawbaugh testified (defts, ii, 1048) that before he went to the Centennial, in October, 1876, he had heard or read that some one had invented a speaking telephone, and had one on exhibition, but he has forgotten where he heard or read this. Mr. Shapley testifies that Drawbaugh was in the habit of reading the *Scientific American* at his store in Mechanicsburg in 1876 (complts, i, 598, ans. 81). It can hardly be doubted that he read the article about Mr. Bell in the *Scientific American* of Sept. 9, 1876, which was put in evidence during the examination of Mr. Benjamin, and is printed with defendants' exhibits. It is as follows: —

[*From the Scientific American, Sept.* 9, 1876, *p.* 163.]

"THE HUMAN VOICE TRANSMITTED BY TELEGRAPH.

"Several weeks ago we gave a sketch and description of the thread telegraph, consisting of two small tin or wooden cylinders, each having a membrane stretched over one end, the two membranes connected by a stout thread. Two persons may readily communicate the sounds of the voice by means of these instruments over a thread fifty or a hundred feet in length. The person sending speaks within one of the cylinders, which causes the membrane to vibrate; the vibration passes along the stretched thread to the membrane of the other cylinder; which being held to the ear of the person receiving the message, the vibration is duly heard, or, in other words, the voice of the sender is made audible.

"Prof. Graham Bell, by a device somewhat analogous, has succeeded in transmitting the tones of the human voice by telegraph. Instead of the thread he connects the membranes of the two cylinders or drums with the armatures of the electro-magnets, one drum being placed at each end of the telegraph wire. In fact, he not

long ago demonstrated the possibility of conveying vocal sounds by means of the ordinary telegraph wires and special appliances for transmitting and receiving the sounds. The apparatus used by Prof. Bell is thus described: Two single-pole electro-magnets, each having a resistance ten ohms, were arranged in circuit with a battery of five carbon elements, — the total resistance being about twenty-five ohms. A drumhead of goldbeater's skin, about two and three quarters inches in diameter, was placed in front of each electro-magnet, and a circular piece of clock spring was glued to the middle of the membrane of each drumhead. One of these telephones was placed in the experimental room and the other in the basement of an adjoining house. Upon singing into the telephone the sounds of the voice were reproduced by the instrument in the distant room; and if two persons sang simultaneously, the two notes were audible at the other telephone.

"At the time of the lecture an experiment was made to show the transmission of articulate speech, an assistant going into the adjoining building where one of the telephones was placed. Several familiar questions were, it is said, understood after a few repetitions. The vowel sounds alone are those faithfully reproduced; diphthongal sounds and rotund vowels are readily distinguished, but consonants are generally unrecognizable. Now and then, however, a sentence comes out with almost startling distinctness, the consonants, as well as the vowels, being clearly audible. Prof. Bell stated that telephonic effects can be produced with three varieties of currents, — the intermittent, the pulsatory, and the undulatory. The first are characterized by the alternate presence and absence of electricity in the circuit; the pulsatory current by sudden changes in intensity, while the undulatory currents are obtained by gradual changes analogous to the changes of density of air produced by the vibration of the pendulum.

"The most recent trial of Prof. Bell's instrument was at his residence, Brantford, Canada, Aug. 11. The Toronto *Globe* states that instruments were placed, one in the porch of the residence and the other in an outhouse on the grounds, and communication between these made by ten miles of wire. Musical notes, the human voice, and songs spoken and sung before one instrument were plainly audible by placing the instrument to the ear at the other. By this invention, too, any number of messages can be conveyed over one wire in either direction, provided they have a different pitch; the tones of the voice can pass over the electric wire, enabling the hearer at any distance to hear distinctly what is said, and to distinguish the voice of the speaker. On Aug. 10 the professor had communication made with his instrument on the common telegraph wire between Brantford and Mount Pleasant (five miles), and was spoken with, while in Mount Pleasant, by Prof. D. C. Bell and Mr. Griffin, from the *Dominion* office in Brantford. On the evening of Aug. 12 the professor tried

a new experiment, having had an instrument made so that three persons could sing different tunes or different parts of the same tune into the instrument at the same time. The trial was perfectly successful, the different voices coming distinctly over the wire at the same time, so that they could be separately distinguished by the listener. The practical exemplification of the lately discovered system of telephony made by the professor afforded much pleasure and information to those present."

It was after this that Drawbaugh showed the tin-can instrument for the first time to Shapley and many other witnesses, showing them no other instrument. Shapley never saw F.

It is worth noticing for its bearing on Drawbaugh's general character, that although he pretends to have invented the pendulum of which he gave a drawing on cross-examination, it was really, with very slight change, the duplication of an old invention, using two levers instead of one, but with change of principle, published many years before, and shown to Drawbaugh before he made his pendulum (complts, i, 599, iv, 358–9).

No. 24. *Isaac D. Landis*, complts, i. — 606, Mr. Shapley's brother-in-law, was with him on the visit. He confirms Mr. Shapley's story, adding that Mr. Drawbaugh when he showed them B, said that this was to revolutionize the world, or words to that effect, — a natural enough statement for anybody to make who had read the newspaper accounts of what Mr. Bell had accomplished, and the reception Mr. Bell's invention was meeting at that time.

In October, 1876, Mr. Bell was widely celebrated as the inventor, and the only inventor of the speaking telephone. It is absolutely impossible that if Mr. Drawbaugh had the finished instruments D and E, he could have talked with intelligent and skilful men like Shapley and Landis about the telephone, shown them an instrument, and not said one word to indicate that he was the man who was far ahead of the world, and not only had *an* instrument which he could call a telephone, but something far in advance of anything then thought of, — for he now wishes the Court to believe that he then did have such an apparatus, — and shown them only the rude tin can B. One of the most extraordinary things of this extraordinary story is that we never, except perhaps in one passage in the deposi-

tion of Drawbaugh's brother Henry, find an intimation, when the Bell patent came out, and Mr. Bell was growing every day more and more famous, that Drawbaugh complained to any one that the honors belonged to him. Whatever else an inventor does or forgets, he does not forget his own claims and his own merits, and does not omit to make them heard. His only proved references to Bell are disclaimers, — stated to Matthews (p. 371, *supra*), and to Weaver, (pp. 490–1, *supra*), and to Grissinger (pp. 410-11, *supra*).

No. 58. *C. A. Landis*, complts, ii, p. 1069.— Mr. C. A. Landis is a brother-in-law of Mr. Rufus E. Shapley, and a brother of Isaac D. Landis. He is a jeweller, and was learning his business at Mr. Shapley's shop in the spring of 1877, being then eighteen years old.

He went to Drawbaugh's shop upon the occasion of repairing a clock near by, and has an entry of the work and the charge for his fares to Milltown. His two visits there were about the first of April, 1877, and about the first of November, 1877. He made one other visit, but he cannot fix the date of it. It was either between the two or after the second one.

Before going there Mr. Shapley had called his attention to the fact of Drawbaugh's having a talking machine and advised him to look at it. He saw one there on his first visit, about April 1, 1877. He testifies (p. 1070) : —

"*Q.* 9. Will you look at the tray of instruments now shown you — exhibits in this case — and tell me whether you see any instrument among them which resembles the instrument which you saw at Mr. Drawbaugh's shop on your first visit there, about the first of April, 1877?

"*A.* I saw this instrument (B) or one similar to it, at least, with the exception of the electro-magnet; this (F) I saw, or something similar to it, without the top; they were both lined with plaster of paris inside; I recognize nothing else.

"*Q.* 10. Please describe a little more particularly the tin-can instrument, like B, which you saw there, and state what explanation he gave you of the construction of the parts of which it was composed, and of the way in which it was operated.

"*A.* I think it was perfectly similar as this B, with the exception of the lining and the magnets; at the time I seen it, the membrane covering the opening of the can had been eaten away by mice, he said; the string outside and the remains of the membrane were as now. He said the manner in which it operated was as follows:

The membrane had fastened to it a piece of metal; this strip, which is fastened to the bottom board at the end of the can — he said it should be platina — it extended upward, the end being directly in front of the metallic piece on the membrane; and by the action of the waves of sound, caused by the voice on the membrane, *the piece of metal and the platina point would come in contact, thereby making and breaking the circuit, which making and breaking would be repeated at the other end of the line.* The other instrument he did not explain.

"*Q.* 11. Of what material is the strip to which you have referred and how is it lettered in the drawing of instrument B, which the respondents have put in evidence?

"*Ans.* It is lettered H. This strip is of tin — the one here on the instrument. I couldn't say positively as to the one I saw."

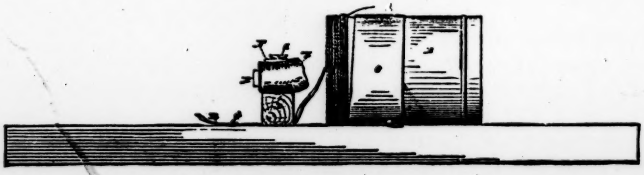
"*Q.* 16 On the occasion of this visit when you saw the tin-can instrument which you have described, did Mr. Drawbaugh say anything to you about any results he had obtained, and did he tell you why he put the plaster of paris inside?

"*Ans.* He said he had had the instrument to speak, but that in words of more than one syllable it would continue to repeat the first syllable, and that he had used the plaster of paris lining to destroy that defect, but it did not prove satisfactory."

The witness's memory seems to be exceedingly accurate as to the details about the shop and what he saw there. He has no recollection whatever of any electro-magnet, and, according to his description, B was then *a circuit-breaking Reis transmitter.*

This is a very important fact, so important that if Drawbaugh could have come on the stand afterwards and denied it, or explained it away, he would undoubtedly have done so. But the defendants have preferred not to call him in rebuttal.

That such was the character of the instrument at that time at least does not rest upon the witness's recollection merely. In front of the place where the diaphragm was in B is a small piece of tin fastened with a set screw to the base, the end of it projecting up in front of



the mid'le of the supposed diaphragm. The defendants have alleged, rather than shown, that that was for the purpose of a spring to increase the tension of the diaphragm.

Now Drawbaugh is an extremely nice mechanic, and it is the merest waste of time to pretend that such a person as he would have used a piece of *tin* to give additional springiness to a stretched membrane. It would be like putting lukewarm water into the teakettle to make it boil. But a stretched membrane diaphragm with a metal patch on the middle and a wire connected to it, — and we do not know what the condition of the instrument was in this respect, because the diaphragm and everything it carried had been destroyed, — with, opposite to this a piece of metal, pointed, and without much if any spring to it, with a set screw to regulate its distance from the metal patch, and then connected to it the wire leading to the battery, would make one of the known forms of the Reis transmitter. It is very significant that the defendants' witnesses, Geo. Drawbaugh and D. M. Ditlow, swore that there was a string *or wire* connected to the bladder (see this quoted, pp. 188, 202, *supra*). This little piece of tin on the instrument B has at its heel end *a small hole exactly such as would be made to put a wire into*. There is no other purpose for which that hole could have been made. It could not have come there by accident, for if the mechanic were making it even out of an old piece of tin with a hole in it, he would have cut it off a quarter of an inch shorter to escape that hole, because the precise length is no consequence. *The structure perfectly fits it for that purpose*, and that the defendants' counsel understood this is shown by the cross-examination of Landis, for they asked Mr. Landis (p. 1067, x-int. 68) whether there was any hole in it except the screw hole which fastened it to the base board, and he said he did not remember. Again, Drawbaugh told Landis that the point ought to be of platinum, and should operate to make and break the circuit (ans. 10, quoted, p. 422, *supra*). That is exactly what a *platina* point would be used for; *platina* would not be used for any other purpose.

Again, the description which this witness gives of what Drawbaugh told him of the difficulty with the instrument was just the kind of a description which might be expected. A circuit-breaker when spoken to will give a sound for each syllable, the wind rushes

for each syllable, producing a peculiar effect upon it, and an imaginative man like Drawbaugh, trying to make a talking machine, will readily believe that he distinguishes the first syllable of whatever word he has in his mind, and still he can hardly help perceiving that all the syllables sound alike.

It is, of course, possible that Drawbaugh might have used F as a transmitter and B as a receiver at a previous time, and when Mr. Landis was there had been experimenting with B as a circuit-breaker. He might well have despaired of getting any success with F and B, instruments then ten years old, and might have tried — as many others have tried, but tried in vain — to make a circuit-breaker talk. He swears he never had a circuit-breaker in general terms, but he does not meet this particular testimony. The mere fact that he had a circuit-breaker *at this time* is almost conclusive proof that he had not got a speaking telephone; for a man who had once got that would never go back and experiment with the other.

Jacob Grissinger. — At about the same time as the visit of Messrs. Shapley and Landis, that is, in the fall of 1876, Jacob Grissinger visited Drawbaugh's shop. He was afterwards one of the Clock Company. He died about the time the defendants closed their general testimony (Drawbaugh, x-ans. 1539, defts, ii, 1081, states the time of his death), so that the defendants would have called him if he could have helped them, but the complainants of course had no opportunity to. He had made an affidavit which the complainants filed and used on their motion for a preliminary injunction. This was put into Drawbaugh's hands on his cross-examination (defts, ii, 1080): —

"*X Q.* 1529. I now hand you a printed copy of the affidavit of Jacob H. Grissinger on pp. 170–1 of the printed [injunction] record, and ask you whether or not the account it gives of interviews between you and Mr. Grissinger and of what y u had in operation in your shop while you were connected with him is c rrect?

"*A.* He had visited my shop at a pretty early time in company with another gentleman, but when they came there they were strangers — I had not knowed them; I had shown him apparatus — clock and different other apparatus, but any particular one I don't remember." . . .

The affidavit already on file was then again put in evidence, and is printed with defendants' exhibits (defts, iv, p.) and with complainants' exhibits (complts, iv, 334). It is as follows: —

"STATE OF PENNSYLVANIA,
CUMBERLAND COUNTY, ss.

"I, Jacob H. Grissinger, a witness of lawful age, being duly sworn, on oath depose and say: —

"I live in Shepardstown, Cumberland County, Pa. I am a justice of the peace. I know Daniel Drawbaugh, of Eberly's Mills, in this county. In 1878 I became interested with him and others in his invention and patent for a magnetic clock, and we furnished him some money to take out a patent and manufacture clocks.

"I went to Drawbaugh's shop at Eberly's Mills with 'Squire William M. Watts, to see Drawbaugh's inventions. I think this was in the fall of 1876 We saw a magnetic clock and some other things. While we were there the talk turned on telephones, and Mr. Drawbaugh showed us a tube or a tumbler, with, I think, the bottom knocked out; it had, or I understood that it had had, a piece of bladder or membrane stretched over one end. It was not connected with any wire, and was a very crude thing, and not in working order. He intimated that he would like to have somebody help him with money to experiment and see if he couldn't make a good instrument. A week or two afterwards I saw an article about a speaking telephone in some paper, I think the New York *Tribune*, and was satisfied from comparing that with what Dan Drawbaugh had said, that the party spoken of in the paper already accomplished what Dan was working at. In 1878 and 1879 I was frequently at Drawbaugh's shop, because he was then at work on the clocks I was interested in. During part of that time he had a telephone which I understood from him he had just made. It was mounted, and I listened while he talked through it; he also had a number of mouthpieces or parts of telephones which he showed me occasionally. He did not have a telephone continually mounted and in operation during the whole time I was there connected with him, but only the latter part of the time. My connection with him about the clocks began in the early part of 1878.

"During the following fall and winter Mr. Edgar W. Chellis became connected with Drawbaugh about measuring faucets. I have seen him at the shop, and Dan used to go to Harrisburg to see him.

"Mr. Chellis has lived in Harrisburg a good while, and there keeps a ninety-nine cent store, where he sells 'notions' and fancy goods. I make this affidavit to be used in legal proceedings.

"J. H. GRISSINGER."

Drawbaugh testified (ans. 1529, defts, ii, 1080) that he went to see Mr. Jacob Grissinger about this case, and Grissinger told him that he already had made an affidavit for us. Drawbaugh adds that Grissinger said that his affidavit was not printed as he made it. This is true, but the difference is not material, and the actual affidavit is better for the complainants than the print referred to. The clause written and correctly here printed "that the party spoken of in the paper, already," etc., was misprinted in the moving papers "that the party spoken of in the paper strictly accomplished what Dan was working at," and the word "connection" was misprinted "conversation." This appears on inspection of the papers on file. The misprint was corrected with a pen in the copies furnished to the Court, and served on the defence, but not in the copy mailed to Grissinger.

There are certain men of education particularly skilled in and concerned with electrical matters whom Drawbaugh came in contact with about such matters. Their relations with him, their position and their opportunities were such that if he had had or had thought he knew how to make an electric speaking telephone he would have told them of it; and if such a thing had existed in his hands with their knowledge before it was heard of elsewhere, the whole course of his history would have been different from what it is; they would have patented the invention and put it to use.

No. 84. *Andrew R. Kiefer*, complts, ii, 1279. — Is forty-three years old. For twenty years has had charge of the telegraphs of the whole middle division of the Pennsylvania Railroad. In the beginning of 1873 he put up the fire alarm for the city of Harrisburg. He has known Drawbaugh for a good many years. The witness is not only manager of the middle division of the Pennsylvania Company's telegraph, but from 1867 to 1880 he was a member of the firm of Hahl, Kiefer & Co., manufacturers of electrical apparatus, doing a large part of the fine electric work for the government and the signal bureau, with a factory at Washington or Baltimore or both (p. 1183), and he kept a little electrical supply store at Harrisburg (p. 1182).

Drawbaugh once came to him from time to time for small electrical supplies and to Mr. Kiefer's office and asked him to go

to a building near the depot at Harrisburg, and then showed him something which was to be used as a telegraph instrument or to operate a fire alarm without a battery. Drawbaugh brought him also at one time the works of an electrical clock to show him, and it is clear it was Drawbaugh's clock which was brought, because of a certain peculiarity in the direction of the second hand which existed in that clock, testified to by Drawbaugh, and which was noticed by the witness and was testified to by him.

P. 1280. "*Q.* 7. Did Mr. Drawbaugh, on other occasions, from time to time, come to your office or meet you around the depot, and speak to you of electrical matters?

"*A.* Yes, sir; he came there on different occasions, — how often I can't say; he got pieces of wire from me, and would speak of electrical matters, more especially so of things appertaining to what he had constructed and how he came to his electrical knowledge and so on.

"*Q.* 8. Did he ever bring an electrical speaking telephone to you?

"*A.* No, sir; not to the best of my recollection.

"*Q.* 9. Did he ever tell you before this suit began that he was at work upon, or had been at work upon an electrical speaking telephone? This controversy began in 1880.

"*A.* Not to my recollection."

"*Q.* 12. If, before you ever heard of electric speaking telephones elsewhere, Mr. Drawbaugh had brought you a set, or had told you that he had a set, by means of which conversation could practically be carried on along a wire, do you think that would have impressed itself on your mind so as to remain fixed there?

"*A.* I think it would without a doubt, if he had made it plain to me that such could be done, or had explained the means."

Before the complainants went to see the witness, Drawbaugh and the defendants' counsel had been to see him twice, and talked over the matter very fully and carefully with him.

Here was a man so friendly to Drawbaugh that Drawbaugh took various electrical inventions to show to him and was in the habit of talking with him about electrical apparatus; himself long a partner, in a large electrical manufacturing concern having in his control telegraph lines, so that he could have tried a telephone on a local circuit, or on several hundred miles of wire. If Drawbaugh had a speaking telephone before any one else had one, and wanted to make it known, as the answer says he did, Mr.

Kiefer would have heard of it; and if he had heard of it the money to patent and a factory to make the apparatus for commercial use were ready.

With the certain fact that Drawbaugh never showed a telephone to Mr. Kiefer, nor asked his assistance, all pretences that he asked the neighboring farmers or the blacksmith or the day laborers (O. Kahney) to assist him, either by means or money, or that he ever made any serious attempt to interest anybody in talking machines, or that he ever had any in which he could interest anybody, become simply an absurdity.

Simon Cameron Wilson, complts, iii, 2057.—Mr. Wilson is now mayor of Harrisburg. For many years and up to the spring of 1875 he was superintendent of telegraphs for the Northern Central Railway, the ownership and management of which was in the Cameron family, with whom, if we may judge from this witness's name, he was connected. In the spring of 1870 the railroad added to its other electrical facilities a small repair shop which they bought from some one who had been carrying on an electrical repair shop in Harrisburg. From that time Drawbaugh was in the habit of visiting Mr. Wilson; he frequently talked with him on electrical matters, getting from him electrical material, such as old coils, magnets, battery plates, etc., which would answer his experimental purposes perfectly well, and bringing him sundry electrical contrivances to show. It does not need any testimony of Mr. Wilson to satisfy the Court that if Drawbaugh had once said to Wilson that he had an electric speaking telephone, Mr. Wilson, then a young man, would immediately have had it brought in or informed himself about it; and that if such a thing had been produced in an office, the occupants of which were the Cameron family and their namesake, the chief electrician of the railroad, there would have been no want of money or enterprise about it; it would have been at once put to use and adopted by the railroad, patented and pushed to successful completion. Mr. Wilson never heard of anything of the kind. That he did not, does not rest upon memory, for as we have before observed of other people, if he ever had heard of it, results would have come.

Mr. Wilson was cross examined for a whole day and not a single

question was put to him — Drawbaugh all the while sitting alongside of his counsel (ans. 88, p. 2072) — which suggested that he had mentioned the subject or shown an instrument to Mr. Wilson. The cross-examination, we submit to the Court, was simply frivolous. It was an attempt to show that Mr. Wilson did not remember everything that Drawbaugh had ever shown him and could not specify every time when Drawbaugh had come to see him. Of course he could not. But will that fact make the Court believe that such an enterprising man and a member of such an enterprising family, a professional electrician, carrying on for the railroad an electrical workshop, could have had a practical speaking telephone brought to him in 1872 or 1873, 1874 or 1875, and done nothing about it, taken no interest in it, not tried it, or could have forgotten the whole subject?

That is not quite all. If such a thing had taken place, if, indeed, such a thing could have taken place, and Drawbaugh's subsequent history been what it is, Drawbaugh first of all would have sought out Wilson, if he remembered anything of the kind. So intelligent a man, enjoying such a prominent position as Mr. Wilson, would have been worth more than all the witnesses Drawbaugh called.

Again, if the matter had ever been brought to the attention of Mr. Wilson, Drawbaugh, sitting by his counsel through the cross-examination, would have specified time and place at least, in a question, and brought it to Mr. Wilson's mind, if anything of this kind took place.

For a fuller discussion of the value of this testimony see pp. 333, 356, *supra*, and the body of the brief.

These are the main facts. The precise language of his deposition is of course not material; the most important facts are as follows (complts, iii, 2068).

He was technically superintendent of telegraphs until the fall of 1874; then the Northern Railway Company was practically absorbed by the Pennsylvania Railroad; his title was changed and he became what the Pennsylvania Railroad Company call "division operator," that is, division superintendent. Dec. 10, 1870, the Railroad Company through him bought J. J. Clark's shop for the manufacture of telegraph apparatus, which was in the same building as the railroad

offices (p. 2059). He first made Mr. Drawbaugh's acquaintance at that shop, and Drawbaugh obtained from him odds and ends of telegraph machines, battery materials, etc., which were of no use to the company.

P. 2060. "*Q.* 13. Did he visit you very seldom or quite a number of times?

"*A.* He visited the shop quite a number of times."

He was cross-examined at length as to the precise number of times he visited (p. 2068): —

"*X Q.* 67. Can you state positively that he visited you on more than three different and distinct occasions while the shop was running, and before you had abandoned it?

"*A.* He visited me once — his first visit — when I became first acquainted with him; and also again to show me an electric clock; and on another visit, previous to the one last stated he spoke to me of the clock that operated with the earth battery; and again on the occasion of his bringing the oscillating magnet spoken of; and at other times, when I gave him scrap; how often I cannot tell.

"[*Answer objected to as not responsive.*]

"*X Q.* 68. The question repeated.

"[*Objected to as a vain repetition and fruitless waste of time.*]

"*A.* My answer made before is the only one I can give in order to determine his visit, and not from any desire to evade.

"*X Q.* 69. My question is a simple one, and calls for an answer yes or no. Are you or are you not able to state positively that he called on you on more than three different and distinct occasions while the shop was running and before it was abandoned?

"[*Same objection, and the complainants object to the attempt to both frame the question and dictate the form of answer.*]

"*A.* I have answered according to my understanding. My detailed answer above shows that he visited me four times, of which I have a distinct recollection of the specific visits."

Then came the question (p. 2071): —

"*X Q.* 81. Do you remember whether he asked you for the gift of some soft iron cores for magnets, or whether you gave him any?

"*A.* I can't state positively; but my recollection is that we spoke on the subject of soft iron cores, of which I had a number in the shop. I cannot say whether I gave him any or not."

Drawbaugh was present in the room during this cross examination — the witness expressly so testified (ans. 88) — and the Court cannot doubt that Drawbaugh had just told his counsel that he had

been at the shop, and among other things had asked Mr. Wilson and obtained from him some soft iron cores for magnets.

Then as to what the witness knew about Drawbaugh's work, etc., he testified (p. 2060) : —

"*Q.* 15. Did he ever bring to you, to show, any electrical contrivances which he professed were of his own construction?

"*A.* On one occasion he brought me a clock which he claimed he had constructed — an electrical clock.

"*Q.* 16. Did he ever bring you an electrical speaking telephone or talking machine?

"*A.* No, sir.

"*Q.* 17. Did he say to you, or give you to understand, that he had invented, or that he had an electric speaking telephone or talking machine?

"*A.* No, sir; not during that time that we are speaking of, or that we had this shop.

"*Q.* 18. Did he ever speak to you of any such thing while you were connected with the railroad before you left in 1876 or 1877?

"*A.* We never had any conversation on any subjects except in the shop named, nor at any time within that period did he speak on the subject of telephone to me.

"*Q.* 19. Were your relations with him such during that time that if he had invented and had in his possession practical operating speaking telephones which he was desirous of making known he would have mentioned the subject to you or not?

"*A.* There was no reason why he shouldn't, and I am very much surprised that he didn't.

"*Q.* 20. If at any time while you were connected with the telegraphs he had brought to you a practical speaking telephone, and told you that his great object and desire was to patent it and make some for use, would he have had difficulty in obtaining from you the needed assistance?

"*A.* If he had demonstrated that such an instrument was a success, I for one would certainly have aided him, and he would have had no difficulty in getting all the aid he wanted.

"*Q.* 21. If at any time while you were in charge of the telegraph Drawbaugh had mentioned to you that he had invented and made a practical and successful speaking telephone, a knowledge of which he was willing freely to communicate to the public, would you have rested with such a mere mention, or would you have taken steps to see the thing and ascertain for yourself what it was?

"*A.* I would have most certainly invited him to bring the thing over to my shop or office, or taken some other means of seeing it.

"*Q.* 22. If, while you had charge of the telegraph, he had brought to you a practical and successful operative telephone, and told you he was willing to allow the public to freely test the same

by using it, would you have been contented by merely looking at it, or would you have tried to talk through it?

"*A.* I would have most certainly had him to test it.

"*Q.* 23. State whether or not you had the necessary conveniences and appliances for the purpose in the building where your shop and office were.

"*A.* We had; that being the general headquarters of the telegraph service of the company."

"*Q. Q.* 82. Who was the president of the Northern Central Railroad while you were superintendent of telegraphs?

"*A.* J. D. Cameron.

"*Q. Q* 83. Who was the principal manager at Harrisburg, next to him?

"*A.* J. N. DuBarry a part of my term. He was general superintendent, and during the balance was vice-president.

"*Q. Q.* 84 Is he the gentleman of that name who afterwards became vice-president of the Pennsylvania railroad?

"*A.* Yes, sir.

"*Q. Q.* 85. Were you on intimate personal relations with those two gent'emen, or were your relations only official?

"*A.* They were both official and friendly.

"*Q. Q.* 86. Would you have had any difficulty in getting those gentlemen to have furnished means if you had shown them a practical and successful operative electric speaking telephone, in 1873 for example?

"*A.* I don't believe I would. When they came to understand the invention, I feel satisfied they would have gone into it.

"*Q. Q.* 87. What is your full name?

"*A.* Simon Cameron Wilson.

"*Q. Q.* 88. Mr. Daniel Drawbaugh has been present in the room during your cross examination, has he not?

"*A.* Yes, sir."

Another piece of testimony goes here. David A. Hauck was of those who bought out the Faucet Company in July, 1873, and thereafter carried on the business at Drawbaugh's shop for several years. He was the manufacturing partner. He never saw nor heard of any telephone, but he became familiar with Drawbaugh's magneto key which he described accurately (ans. 48, complts, i, 793). He testifies (complts, i, 794): —

"*Q.* 50. If you heard Mr. Drawbaugh say anything about trying it on a telegraph line, will you state what he said and what, if anything, was done in consequence of what he said?

"*A.* Some time after he had it completed,— he had been trying it in the shop for different purposes,— he expressed a desire to try it

on a long line of wire. Feeling interested by his request for permission, I applied to George A. Zacharias, who was the agent of the Cumberland Valley Railroad at Mechanicsburg, asking him to give Mr. Drawbaugh an opportunity of testing his instrument. He said he would, and some time after Mr. Drawbaugh and I went to the telegraph office, and Mr. Zacharias connected the instrument to his relay or sounder, I don't remember which, and endeavored to write with it, as he said; but said it was too cumbersome and unwieldy. He could not do much with it I went away after about ten minutes, leaving Mr. Drawbaugh there."

When he sought for and got leave to try an electric instrument on a real line, he took a very rude, imperfect magneto key, but no speaking telephone. This has not been contradicted.

No. 83. *Isaac Lloyd*, complts, ii, 1264. — This gentleman is a school teacher, fifty years old, living in Harrisburg; was alderman there for five years. Has known Drawbaugh twenty-five years. He visited him in 1866 with Mr. Theophilus Weaver to get Drawbaugh to make a machine to cut out pencil erasers. From time to time has been at his shop, seen his various inventions, a number of which he describes, and appears to have been quite friendly with Drawbaugh, for Drawbaugh came to him from time to time. He went so far as to assist Drawbaugh in making one of his clocks by engraving and gilding the glass for the dial. He himself employed electricity by doing a good deal of electro-plating for hardware dealers.

He saw many of Drawbaugh's inventions (see p. 1266), and, upon one occasion, not long before March, 1875, Drawbaugh brought to Harrisburg, and the witness saw in his hands and on exhibition near the railroad, an instrument to telegraph without a battery, and saw him operate this instrument in the presence of Mr. Wilson, then connected with the Northern Central Railroad telegraph.

During all this time and up to 1878 he never saw or heard that Drawbaugh had a speaking telephone.

In February, 1878 (see p. 1271), he went to Drawbaugh's shop with Mr. Worley, another school teacher of Harrisburg, to see Drawbaugh's clock. They saw it and wrote a very laudatory article about it in the newspapers. At that visit Mr. Drawbaugh said that he was working on a telephone, but that the sound was not satisfac-

tory. The instrument was not shown to the visitors nor explained to them.

This witness made an affidavit for the complainants to file as part of their moving papers, but it seems that before that somebody, apparently from the defendants, had been to see him about his recollection. By one of those coincidences which has happened several times in this case, this witness after he was summoned and before he started to come to Philadelphia to testify, was pursued by the defendants and Drawbaugh went to see him, — but without effect (p. 1272).

At one time Mr. Drawbaugh had a talk with him about vibrations, referring to the buzzing of a bee's wing. Witness feels entirely confident that this was in 1877 (p. 1273), though of course upon a mere matter of date he is not ready to swear positively that that was the year.

An attempt was made upon cross-examination to show some discrepancy between the statement made by him and that by Mr. Worley about their joint visit. It appears, however, from both of them that Drawbaugh spoke of some trouble about the sound, and that he was trying to remedy it. Mr. Lloyd says the sound "produced a kind of backlash" which he intended to "control"; Mr. Worley says the sound was "too much diffused," and Mr. Drawbaugh intended to correct this by enclosing it in a box. It is evident that both of them heard from Drawbaugh a statement that he could transmit a sound, but that it was of too indefinite a character at the listening station to be satisfactory.

No. 93. *F. U. Worley*, complts, ii, 1551. — Went with Mr. Lloyd to Drawbaugh's shop in February, 1878, to see his magnetic clock and write an article about it. Drawbaugh then spoke of the telephone to them; did not say how long he had been working at it. Did not tell them that he had then got a successful instrument; did not say that he was the original inventor of it, although he apparently knew that they were going to write an article about him.

This, in connection with the other newspaper articles of that spring, is very strong evidence that he had not even then anything

which he thought worth bringing before the public or any claim to which he desired to give publicity.

No. 66. *Henry S. Rupp*, complts, ii, 1128. — Age, fifty-six; near Shiremanstown; nurseryman and florist. He has the largest establishment of the kind in the county, and has carried on his business eighteen years. He was a very active member of the *Drawbaugh Manufacturing Company*. The concern was organized in 1867 as a partnership, called the Faucet Company or the Pump Company, and in 1870 was turned into a corporation. He produces a certificate of stock for twenty shares, of $100 each, dated Oct. 1, 1870, and states that the corporation was organized under the general laws with an actual paid-up capital of $20,000.

The company manufactured not only Drawbaugh's faucet, but a number of other things which Drawbaugh had got up, and they advertised them in their billhead (printed p. 225, *supra*). Drawbaugh suggested to them to manufacture some other things which he had invented, among which was a gas governor. The records of the company, which the witness reads from, state that at the meeting of Jan. 29, 1869, Drawbaugh offered to furnish his gas governor to the company on terms to be agreed upon. The company met for the purpose of examining it; Drawbaugh fitted up sufficient apparatus to manufacture gas in his forge outside, and carried piping into the building up to the second story; presently a seam of one of the retorts opened in the fire and that ended the exhibition (p. 1130). He did not enliven their spirits after this failure by talking through a wire, nor did he offer to show a telephone to the group of capitalists who had met at his shop. It is not pretended that any one then present had heard that he had such a thing.

It appears that at the same time, in the early part of 1869, the Drawbaugh Company was seeking for other business besides the manufacturing of faucets. In March, 1869, on motion of the witness Rupp, and Drawbaugh, it was agreed that Drawbaugh should as speedily as possible get up some screw machinery to be used in the shop. It never was done, however. Mr. Drawbaugh said he thought he could invent such a machine, and the company formally voted that he should do it (p. 1131). These facts are proved by

the records of the company; but the witness states that Drawbaugh never proposed to the company that they should patent or manufacture talking machines, and neither Drawbaugh nor any one else pretends that he suggested such a thing (ans. 21, p. 1131). He is sure that if, before the final division of the property in July, 1873, the company had known of a practical talking machine at Drawbaugh's shop, it would have taken hold of it (ans. 22, p. 1132).

The company began its operations at Drawbaugh's shop in 1867, and sold out to Hauck Brothers in July, 1873. Witness swears positively that during those six years he never used nor saw a talking machine at the machine shop, and never heard that Drawbaugh had one. During the active operations of the Faucet Company he was there at least once a month; afterwards less frequently. Drawbaugh did considerable work for him in 1872, about fitting up some piping at his greenhouses.

In 1873 Drawbaugh made and presented to him a weather gauge in the hopes that if it worked well Mr. Rupp would recommend it to others. About 1874, or thereabouts, Drawbaugh brought a signalling machine to the witness to show him. Up to the fall of 1876 witness had never heard that Drawbaugh had a talking machine. He was sure that if he had had a practical machine which people could and did talk through the witness would have certainly heard of it, and if he had had such a machine during the existence of the company witness is quite sure that in offering his other inventions to the company he would have offered that or mentioned it (ans. 46–48, p. 1135). He says (complts, ii, 1135): —

"*Q.* 45. Up to the summer of 1876 had you ever heard that Mr. Drawbaugh had at his shop a talking machine, or a machine by which persons at different places could carry on a conversation along a wire?

"*A.* No, sir."

P. 1144. "*X Q.* 90. Are you certain that you never heard of Mr. Drawbaugh's telephone or talking machine prior to the summer of 1876?

"*A.* As far as memory can be depended, I am.

"*X Q.* 91. In your seventy-seventh answer you named all the members of the Drawbaugh Manufacturing Company; are you certain that you never heard any of those gentlemen say anything about Drawbaugh's telephone or talking machine, from the year 1867 to the year 1872?

"*A.* I have no data or anything to fix a certainty, *although circumstances and events transpiring during that time show without a doubt that there was nothing said about the telephone.*"

"*X Q.* 101. So far as you remember, was he willing and anxious to show his inventions to any one of you more than to the others?

"*A.* He let on so to me, that he did. He told me that he always liked to show his inventions to me and explain them; that I always gave more attention to what he said than some of the other ones.

"*X Q.* 102. Then, from your recollection of that fact, do you think he would have shown his talking machine to you if he showed it to any member of the company?

"*A.* Yes, sir. I do think he would for the reasons above stated, and also for the reason that Mr. Drawbaugh and myself were then, as well as now, on quite intimate terms."

Here is a neighbor of Drawbaugh six years a partner who furnished money, an active, energetic man, precisely the person to whom Drawbaugh would apply for assistance if he wanted any; yet Drawbaugh never came to him about the talking machine, and this witness never heard of it.

Witness says that the community in the neighborhood of Eberly's Mills "constitute a prosperous and enterprising people" (ans. 49, p. 1136); the facts of their history and the readiness with which they raised money to assist Drawbaugh and other inventors to the extent of over $30,000, spent in his shop in ten years, prove it. Witness says that if Mr. Drawbaugh for a number of years before speaking telephones were heard of elsewhere had exhibited freely to others practical working instruments, he would have had no trouble in getting all the money that would be needed to patent or manufacture them (ans. 50, p. 1136).

Witness remembers particularly that the first telephone of any kind that he ever saw was at Hauck's store in Mechanicsburg in 1877 (p. 113[illegible] [illegible]s sure that he had never seen one at Drawbaugh's sho[illegible] [illegible]sewhere before that. After that, he saw and listened at one in Drawbaugh's shop, but did not understand what came through it (pp. 1139–40). The instrument that he then listened at — which it will be remembered was in 1877 — was B. Drawbaugh had applied to him for his recollection before the complainants went near him. The defendants had been to him pretty often about

it, and had brought him various instruments and shown them to him. Finally the witness, with Mr. William R. Gorgas and Mr. Hertzler, met at Mr. Gorgas's house with Mr. Jacobs and Mr. Hill, defendants' counsel, and looked over the books with a view to ascertain Drawbaugh's financial relation with the company in order to show, if possible, his poverty. The consequence of that meeting was that the defendants did not call either of those witnesses on the subject of those relations (pp. 1140–1).

It appears from the records of the company that as late as March 25, 1870, the company, which had recently adopted "Drawbaugh Manufacturing Company" as its corporate name, had such confidence in Drawbaugh that it formally elected him master mechanic and draughtsman. They had been then for more than a year trying to find something to occupy their capital and machinery with, examining at least one of his other inventions, and finding he had nothing, asking him to make a new invention. It is folly to pretend that he would not have offered his speaking machine to them if he had had one. The company had not been successful; but their want of success did not seem to them to be a reason for giving up business; they had plenty of capital to go on with. Faucets had not been profitable, and what they were looking for was some other thing to do, particularly something which he had invented.

Mr. Rupp's cross-examination was rather long, chiefly upon details to show how far he remembered immaterial matters not likely to make a serious impression on anybody's mind. The strong fact, however, is that this gentleman, who from his position and intelligence would have been a better witness for the defendants than almost anybody they had, if he had ever seen any telephones there, was interviewed by them time after time, and could not find any such thing in his recollection. It seems that when the defendants came to him he told them that he could not remember of ever having seen any telephone at Drawbaugh's shop. They showed him the wooden instruments, and did not show him the glass tumbler or tin can, and that made his mind dwell on wooden instruments. Afterwards, when summoned by the complainants, he got to studying it up, and the day he came to Philadelphia he told the complainants'

counsel that he thought he had seen an instrument at Drawbaugh's shop in 1877, the occasion he had referred to, which was painted green and had plaster of paris inside. He was then taken into the room where the exhibits were, and he immediately picked out B, and said it would be like the one he had seen at Drawbaugh's shop if it had plaster of paris inside, and he was then informed that that instrument at one time did have plaster of paris inside (p. 1156).

The defendants have put in some surrebuttal testimony referring slightly to Mr. Henry S. Rupp, but it was not sufficient to call for an, evidence in reply. All of it is that one John Blair (defts, iii, surrebuttal, 410) says that while he lived on Merkle's farm, between 1866 and 1869, he "heard Mr. Henry S. Rupp speak of Drawbaugh's talking machine," naming no time or place, and not saying what he heard. Weak as such testimony always is, especially when it relates to a period fifteen years before the witness testifies, it is perfectly certain that if Rupp had ever known of a practical talking machine (and the allegation is that all Drawbaugh's machines were practical instruments) during the time of the Faucet Company, and while he was searching for something for it to do, they would have taken up the invention. Not merely Mr. Rupp's memory, but his course of conduct speaks for him.

The defendants called Mr. Rupp in surrejoinder (defts, iv, 238), about some road superviser's accounts (he has been county auditor for a dozen years), but did not ask him about telephones.

Mr. Rupp's deposition is in fact an epitome and sample of the proof from the members and workmen of the Faucet Company or Drawbaugh Manufacturing Company. It would be enough for us that the defence had not called any of them to swear to speaking machines during the time they were concerned there, – 1867–1873, — and that they had called some for other purposes, and had not asked them about telephones (v. p. 244, *supra*). But we called Mr. Rupp and several others to show specifically that no such thing then existed. Among those witnesses is

No. 44. *Jacob Carns*, complts, ii, 883. — He is an intelligent mechanic, thirty-two years old. He worked in the machine shop at Milltown, for the Faucet Company, from Aug. 10, 1868, until

Aug. 7, 1869. During this period he boarded in Drawbaugh's house from Feb. 27 to Aug. 7, 1869. Oct. 11, 1869, he went back and worked in the shop until Feb. 4, 1871. He thus worked in Drawbaugh's shop from Aug. 10, 1868, to Feb. 4, 1871, with a few months' intermission, and during six months of that time boarded in Drawbaugh's house (x-int. 207, complts, ii, p. 909). He knew about a number of Drawbaugh's other inventions, which he mentioned on p. 871 particularly. He assisted him occasionally in some experiments about other things, as particularly about the gas governor and its exhibition to the members of the Drawbaugh Manufacturing Company (p. 922); and being one of the young men in the shop and a boarder in Drawbaugh's house, teaching music also to Drawbaugh's daughter, for he was a good deal of a musician, in later years playing the organ in church; he certainly would have known everything about the talking machine if it existed, and unquestionably would have been called upon by Drawbaugh to assist him in experiments with it.

It is perhaps enough for our case that a witness so circumstanced was not called by the defence. *It is quite enough for our case that they have not called a single person connected with the Faucet Company, who pretends ever to have heard speech through any telephone instrument during the existence of that company up to July*, 1873; but Mr. Carns is a peculiarly strong witness against them because he lived in Drawbaugh's house. His examination was full, and his cross-examination was very long, but it left the facts entirely unshaken. He was a little more intimate with the Drawbaugh family than even these statements would imply, because after he left Drawbaugh's shop he went to work in Harrisburg in 1872 and worked there for the most part of two years. Harman K. Drawbaugh, nephew of Daniel, and one of the defendants' most conspicuous witnesses, who knew him when they worked at Milltown, worked at the car shop with him and they boarded and roomed together (p. 888). Carns testifies positively not only that he never saw a talking machine at Drawbaugh's nor heard of any before 1876; but that he never heard from Harman Drawbaugh that his uncle Daniel had a talking machine. No one contradicts this.

All the dates of this witness are fixed by his diary and books.

The cross-examination was devoted to showing that there were occasionally some particulars about the shop which after ten years the witness could not remember, and then it was devoted in part in an attempt to get up a quarrel between counsel and witness and make it appear that the witness would not answer. It was a system of annoyance and badgering, which, however, was quite ineffective.

It may be as well remarked here as anywhere that throughout the cross-examination of our witnesses the attempt was made to show that they could not remember various details which either existed or which cross-examining counsel alleged existed. Of course not, after a lapse of so many years; but it does not follow that because these men could not remember every detail in the shop that they would have forgotten so startling a thing as the talking machine, if they had ever seen it in use, or if it had existed there at all.

The character of this cross-examination may be gathered from a few of such of the questions that were put to the witnesses thus situated. For example, witness Nichols (p. 868) is asked: —

"*X Q.* 129. Was there a bench in that room?
"*A.* There was.
"*X Q.* 130. Did it have any drawers?
"*A.* I don't know.
"*X Q.* 131. If it did have, then of course you do not know what was in them, do you?
"*A.* If it did have, of course I do not know what was in them, because I do not know whether it had any drawers.
"*X Q.* 132. Was there any cupboard in that room?
"*A.* I don't know; I don't remember.
"*X Q.* 133. If there was, then you do not know what was in it, do you?
"*A.* I do not.
"*X Q.* 134. Was there any shelf in that room?
"*A.* I do not know.
"*X Q.* 135. Then if there was, you do not know what there was on it, do you?
"*A.* I do not."

And so on as to an alleged desk, an alleged bench, an alleged cupboard, etc.

Carns was asked about various things; if he remembered whether such a thing existed there; and when he said he did not remember,

then they said to him, "If it were material in the case to prove that such a thing did exist, it could not be done by you, could it?"

But they were unfortunate in this. Their witness Hoffman had testified that he worked for the Drawbaugh Manufacturing Company in the summer and until the fall of 1868, and if that was true he must have been known to Carns, who came there in August, 1868. Carns said that he did not remember Hoffman, who, if his own testimony was true, must have been there at the same time. Carns was then asked (p. 911):—

"*X Q.* 219. If it were material in this case to prove that there was such a man as E. B. Hoffman there in Drawbaugh's shop at work at any time while you were there, it could not be proved by your testimony, could it?

"*A.* It could not."

It will be seen by reference to the deposition of Hoffman (p. 136, *supra*) that *he* was the witness who was wrong, and that it was proved by the books of the company and the deposition of Gorgas, the bookkeeper, that Hoffman did not work there after April, and consequently left four months before Carns came. The comparison between the witnesses on the two sides was rather unfortunate for the defence. The trouble in this case is that whenever we come to get down to the actual and absolutely provable facts of the case on any question in conflict, the defendants turn out to be wrong.

But that is not the worst of this particular instance. Long before this cross-examination of Jacob Carns, the fact was proved by the defendants' witness, Gorgas, and the books, that Hoffman left there in the spring of 1868, several months before Carns went there. It cannot be supposed that the cross-examining counsel deliberately and intentionally misstated the fact in the cross-interrogatories to this witness in the hope of misleading him. We must take it that the cross-examining counsel who conducted this examination had forgotten the material matter proved by one of his own witnesses a year before.

Now, he can hardly contend, after that, that a man is unreliable upon important points, when he is mistaken about details and recent details.

Another favorite mode of cross-examination is to ask a witness

who never saw a talking machine at Drawbaugh's shop what he specifically remembers to have seen at each particular visit as distinguished from another visit. The best memory that humanity can furnish could not do that.

Carns testified as follows (p. 887): —

"*Q.* 23. While you were at Eberly's Mills was Mr. Daniel Drawbaugh's house well furnished, and did his family live comfortably?
"*A.* They lived comfortable. His house was well furnished."

It will be remembered that the witness boarded there six months.

Two witnesses were called to testify that Carns had made statements inconsistent with his deposition, but both are too weak to be worth considering. They are W. H. Zearing, defts, iii, surbtl, 122, and Samuel H. Bates, defts, iii, surbtl, 380. Their testimony is stated in our abstract of the defendants' surrebuttal. Neither of them can stand alone, much less attack another witness.

No. 57. *John F. Hursh*, complts, ii, 1055. — Age, fifty-four years; Kansas. Was a member of the Faucet Company, or Drawbaugh Manufacturing Company, which began to manufacture in 1867 and ceased in 1871, though it did not dispose of its property and divide the proceeds until the summer of 1873. He paid originally $1,000 to Mr. Drawbaugh for one sixth of the patent, and contributed over $2,000 more cash capital.

From 1867 to 1871 he visited the shop at intervals of two weeks and longer, and would generally see Drawbaugh there, going over different parts of the shop. Has been in the room called Drawbaugh's office; has seen Kline's patent axles at the shop, — these were manufactured in 1875 and 1876. Bought a ram from Drawbaugh in 1876 and Drawbaugh put it up. After this he made changes and repairs in it, and Drawbaugh did this. The original cost of the ram was over $60.

From 1871 to 1876 was at Drawbaugh's shop once or twice a year. After that was there several times about alterations or repairs to his ram. Drawbaugh generally spoke to him about his inventions, and seemed pleased to. Witness enumerates several and gives some description of them. Mr. Drawbaugh first spoke to him about a talk-

ing machine in September, 1878. (See p. 1059.) He then saw B, and he thinks he saw A and F. The others do not bring any recollection to his mind. That was the first time he had ever heard that Drawbaugh had a speaking telephone, or had ever seen any of the instruments. It was after he had heard about telephones elsewhere. He does not believe that Drawbaugh could have had them in his shop and been in the habit of showing them freely without his knowing it (p. 1069).

Cross-examination. Is willing to swear positively that Drawbaugh did not have them seven or eight years prior to 1876, and show them to a great many persons during those years. He cannot say how many times he was in the shop during each of the years 1872, 1873, 1874 and 1875, nor name any particular occasions which took him there during those years. When being asked whether he knew that Mr. Drawbaugh showed it to different persons named at special times, he answers that he of course does not know what was shown to them.

The witness was at Drawbaugh's shop several times about his ram, between 1876 and September, 1878. Cross-examining counsel asked him whether Drawbaugh mentioned the name of persons who had ordered rams of him before the witness got his, and he names two, George Heck and Daniel Epply.

Then an ingenious question is put to him: whether Drawbaugh mentioned anything about putting a ram in for Kissinger, *not limiting it as to time at all*, and the witness says that he has an impression of hearing something about it. The precise language is on p. 1065:—

"*X Q.* 100. Did he mention anything about putting a ram in at or near Marysville, on the farm then occupied by George W. Kissinger?

"*A.* It occurs to me that he did mention something about it.

"*X Q.* 101. So far as you have any recollection of what he said about it, please state it.

"*A.* I don't remember."

The use which we suppose the defendants wished to make of that is to endeavor to show by this witness that Drawbaugh furnished a ram to Kissinger before May, 1876, or was talking of it before May, 1876. But the Court will observe that the question did not contain

any limitation of time whatever. It was evident that the cross-examining counsel did not dare put a limitation of time in, and consequently all he got by that was that at some time or other prior to September, 1878, Drawbaugh said to the witness something or other — we do not know what — about putting in a ram, which is very likely, but of no value for the defendants.

The witness had sworn positively that if there had been talking machines there before 1876 shown to large numbers of persons, he would have known it. An attempt was made to make him commit an excess in testifying, by asking him whether he would have seen and known of talking machines if they had been in the shop between October, 1876, and September, 1878. He says he thinks he would have known of them if they had been there, although he would not be positive about it.

The witness undoubtedly has not a very definite and precise memory of exactly all that he saw, or exactly where he saw each thing; but he was a constant visitor at the shop from 1867 to 1871. He visited once or twice a year after that. His firm recollection and belief is that he never heard of telephones until 1878, and that he never heard of them until after he had heard of telephones elsewhere. That is an actual fact about which a man is not likely to be mistaken. He would have remembered whether his old friend and partner in the faucet business had had speaking telephones long before he heard of them elsewhere. But the testimony of this witness does not stand alone. He is only one out of many of the Faucet Company who knew nothing of the alleged instruments during that time.

An attack was made on him by two witnesses, but they are so self-contradictory that their testimony amounts to nothing.

In the defendants' surrebuttal, Jacob Miley, No. 28 (defts, iii, p. 170), testified that his wife was a cousin of Mr. Hursh's, and that Mr. Hursh once spoke to him about Daniel Drawbaugh's talking machine. He puts the date very vaguely (p. 171): —

"*Ans.* 8. To my best recollection it is eight or ten years ago, — in 1873, 1874 or 1875, — along there; I could not say now which of the three. It is from eight to ten years ago any how; not less than eight and may be ten years ago."

The witness has lived for an indefinite number of years on the

next farm to Mr. Hursh, besides being a relation to him. They were intimate neighbors, well acquainted. His memory as to the date, of course, is absolutely worthless, and as all the communication he ever had with Mr. Hursh on the subject, so far as it appears, was what is presently to be stated, his testimony is worthless. What he pretends to have learned from Mr. Hursh is (p.171): —

"*Q.* 9. Tell us the circumstances under which Mr. Hursh happened to mention that machine to you at that time, — how it happened, and what he said about it.

"*A.* He came to my place, — in the week, Thursday or Friday, — and asked me to go with him to Mr. Hertzler's and Drawbaugh's on a Sunday; and the weather being bad on that Sunday, we didn't get going. He had stated to me that Mr. Drawbaugh was working at a speaking machine or talking machine. That is what he called it — talking machine. That is about all — we didn't get to see it.

"*Q.* 10. When he invited you to go with him to Mr. Hertzler's and Mr. Drawbaugh's on that occasion, did he say anything about your going to see Mr. Drawbaugh's talking machine? If so, what?

"*A.* He said we would go and see it, — see what it looked like, or something to that amount; I can't recollect the words exactly.

"*Q.* 11. Did he give you any idea as to what the machine was to be used for? If so, what idea?

"*A.* For talking from one place to another.

"*Q.* 12. Did you remember whether or not, at that time, when you had that conversation with Mr. Hursh, the old Drawbaugh Faucet and Pump Company, of which Mr. Hursh was formerly a member, was still carrying on its manufacturing operations at Milltown? Please give us your best recollection and belief on that subject.

"*A.* I know nothing about their carrying on. I think Mr. Hursh had a kind of an interest in there, at the time yet that he spoke to me, in something.

"*Q.* 13. Did you get that idea from Mr. Hursh's conversation at that time?

"*A.* Not just at that time. I knew that he had an interest, but he didn't tell me just at this time; I didn't ask him the question, neither."

This testimony means, if it means anything, that upon an occasion, the date of which the attacking witness cannot fix, but which he guesses was 1873, 1874 or 1875, Hursh mentioned to him that Drawbaugh had a talking machine, *as if it was something new to him.* "We would go and see it, *see what it looked like*, or something to that amount." That, of course, so far as it is any

testimony at all, is conclusive testimony that Mr. Hursh has never seen it up to that time; and Mr. Hursh and the witness did not go to see it then. Considering that Mr. Hursh had been at Drawbaugh's shop once a fortnight for three years from 1867 to 1871, this is about as good testimony as we should want that no such thing was there during the time of the Faucet Company.

The next witness called against Hursh in surrebuttal is No. 49, George W. Atticks (defts, iii, 300). Mr. Attick's testimony is proved to be worthless by his vagaries about the freshet on the Yellowbreeches Creek. According to his story it carried away the clover-mill bridge, the fulling-mill bridge and forge foot bridge to his own knowledge, and he heard that another one was carried away. As it has been absolutely proved that neither of them were carried away, he is a worthless witness.

Next he says that John Hursh married his sister, and that he talked with Mr. Hursh about talking machines (p. 302): —

"To the best of my knowledge it was between 1875 and 1877."

Then an ingenious leading attempt was made to get the witness to say that Mr. Hursh spoke of it as an old thing, but the witness put it quite otherwise (p. 303): —

"*Q.* 18. When you and Mr. Hursh so talked about it, did you inform him that Mr. Drawbaugh had a talking machine, or did he already seem to know the fact and speak to you about it?

"*A.* I do not know whether I knew of it before him and I talked, but my impression is that I did. I do not know whether I informed him that Mr. Drawbaugh had a talking machine or whether he seemed to know the fact. I don't know how that was at all. I do know that we talked about it, and talked of going to Drawbaugh's shop to see his talking machine, and to see his electric clock that he was having at that time."

That answer means that it was a new thing to both of them, and that they talked about going to see it.

Now we are quite content to have it proved that at some indefinite time, which the witness cannot pretend to locate earlier than the end of 1877, and is sure was not before 1875, Mr. Hursh heard of Drawbaugh's talking machine, and had his curiosity excited to go and inquire about it.

No. 41. *David A. Hauck*, p. 786.
No. 42. *Davis Major*, p. 849.
No. 43. *Edward Nichols*, p. 852.
No. 67. *Samuel F. Hauck*, pp. 1160, 1180.

Hauck Bros. & Co. The testimony of this firm and of the persons who worked for them at Drawbaugh's shop is very important.

In July, 1873, the Drawbaugh Manufacturing Company sold out their property, patents, machinery, etc., to Hauck Bros. & Co. of Mechanicsburg, who paid them $7,000 in cash. (See defts.' witness W. L. Gorgas, defts, i, 682.)

This is an admitted fact, and the papers were produced by David A. Hauck (complts, i, 789).

The new firm thereafter carried on the faucet business with the same machinery and under the same patents of Drawbaugh at Drawbaugh's shop. For about a year they carried it on with some vigor; afterwards it fell off, and they only made faucets from time to time, and finally, during 1876, 1877 and 1878, moved most of their machinery to Mechanicsburg.

David A. Hauck, machinist, was the member of the firm who actively carried on the manufacture, working with his own hands and superintending all the mechanical part of it. Samuel F. Hauck attended more to the commercial part, and came to the shop from time to time. David A. Hauck was there much of the time during the last half of 1873 and part of 1874, and pretty frequently afterwards; less frequently through the rest of 1875 and part of 1876.

The period during which he was so constantly at the shop that he must be assumed to have knowledge of most of what went on there was in the summer of 1873 and to the latter part of 1874 or the middle of 1875. He worked in the upper story of the shop, on the same floor where Drawbaugh had his private workshop, and is alleged to have kept all his telephones. Hauck was a skilful and ingenious mechanic, and the manner in which he gave his deposition shows intelligence far in advance of that of almost any of the defendants' witnesses who pretend ever to have seen any talking machine.

If the story of the defence were true that the talking machine during those years was the thing which occupied Mr. Drawbaugh's attention and almost entirely filled his heart and mind; if there were practically operative talking machines at the shop, and the fame of

them had spread throughout the country, it cannot be a matter of question or forgetfulness or doubtful recollection with any habitual worker in the shop, whether he knew of them or did not. He must have known all about them and could not have forgotten them.

The defendants had about forty witnesses in chief who said that at various times they had used these alleged machines before the summer of 1876. The complainants called about forty persons whose relations to Drawbaugh and his machine shop were such that they must have seen these things and used them if they existed. David Hauck is among the prominent witnesses of this class. If the testimony of himself and others like him is to be believed at all, then it is certain that the defendants' story is untrue. Of course one man might have forgotten; it may be argued that one man may have been there and not seen these things, even if they existed; but it is absolutely impossible that forty or fifty men could have frequented that shop, or lived in its immediate neighborhood, and find no recollection of the talking machine in their mind, if the defendants' story is substantially true, or if enough of it is true to make a defence.

There can be no doubt about D. A. Hauck's opportunities. He conversed with Drawbaugh about inventions. He and his brothers had just put about $7,000 into one of Drawbaugh's inventions. It seems extraordinary that when acquaintances were ready in 1873 to put so much money into his faucet, he should not at least have asked them to put some into his telephone. If they were men who could raise $7,000 so easily for one invention, they certainly would have been asked for one or two hundred dollars for the other.

The next question is whether Hauck ever did know of a talking machine there. We have, first, his deposition, in which he swears in the most positive and unequivocal manner, and thoroughly well bears cross-examination upon it, that he never saw or knew of any talking machine at Drawbaugh's shop. On cross-examination the defendants made an attack upon him — savage in intention, but harmless in result. He had a controversy with Drawbaugh in 1879, consisting of an interference in the Patent Office about an improvement in measuring faucets, in which Drawbaugh beat him. Upon that a violent attack to show enmity, and to show that he is an untrustworthy witness, was based. But the value of his deposition

does not depend even upon his own credibility, although that has not been damaged by the attack. That he never did see telephones there is proved by Drawbaugh himself. Hauck states (pp. 787, 788, 792, 797) that Drawbaugh showed him a large number of his inventions; that he frequented Drawbaugh's private room where he kept his private materials, and that Drawbaugh constantly explained his inventions to him. This is not denied, and from Drawbaugh's usual habits cannot be doubted. Indeed, Drawbaugh substantially asserts this about D. A and S. F. Hauck in his cross-examination of S. F. Hauck in the faucet case, q. 22, p. 456, *infra*.

Among other things that he and Drawbaugh had a good deal to do about, was the magneto key, so called, a contrivance which Drawbaugh made for telegraphing by means of a permanent magnet without a battery. Devices of this character are very old, and even the most refined of them — the Siemens-Halske key — was found not useful in practice. Drawbaugh's instrument was quite worthless. But he thought a good deal of it, and it is evident from his advertising card of June, 1874 (printed p. 335, *supra*), that it was one of his cherished contrivances. It there figures in the largest print. Hauck (p. 793, ans. 48) gives a very clear description of the first magneto key made by Drawbaugh, and he witnessed trials of it in Drawbaugh's shop.

Then he continued as follows (complts, i, 794) : —

"*A.* 50. Some time after he had it completed — he had been trying it in the shop for different purposes — he expressed a desire to try it on a long line of wire. Feeling interested by his request for permission, I applied to George A. Zacharias, who was the agent of the Cumberland Valley Railroad at Mechanicsburg, asking him to give Mr. Drawbaugh an opportunity of testing his instrument. He said he would, and, some time after, Mr. Drawbaugh and I went to the telegraph office, and Mr. Zacharias connected the instrument to his relay or sounder, I don't remember which, and endeavored to write with it, as he said; but said it was too cumbersome and unwieldy; he could not do much with it. I went away after about ten minutes, leaving Mr. Drawbaugh there."

Drawbaugh did not venture to go on the stand to contradict this story, neither did they call Zacharias.

Here, then, we have the fact that this claimant, alleged to have been for six years in possession of practical speaking telephones, and, if

his story be true, desiring to try it on a line of wire beyond all things, yet had no difficulty at all, simply by asking his friend Hauck, in obtaining permission to try some electrical instrument on a real line, — and the one which he wanted to try, and took up for that purpose, was his magneto key. It is impossible to believe after that the story of these defendants, who wish the Court to think that the only electrical device heard of in the community at that time was a talking machine, and that that was the thing, and the only thing, which interested Drawbaugh.

Hauck testifies that subsequently he saw an improved form of this key at Drawbaugh's shop.

Now, upon the question of whether Drawbaugh ever showed any talking machines to Hauck, or whether Hauck knew of its existence, we have virtually the confession of Drawbaugh himself.

Of course, if the thing existed there, and was publicly known to any one, Hauck must have known of it. In the interference, Drawbaugh *v.* Hauck, on faucets, testimony was taken in the summer of 1879. Hauck took his testimony first, and was the first witness. At the opening of his cross-examination, which was by Mr. M. W. Jacobs, counsel for the defence in the present suit, and then also counsel for Drawbaugh, Mr. Jacobs undertook to get from Hauck the admission that Drawbaugh was an inventor of originality. It was an issue introduced into that contest by Drawbaugh. The part now to be referred to was printed partially in Hauck's deposition, pp. 835 and 836, and fully and verbatim in complainants' exhibits (complts, iv, 251).

Mr. Jacobs asked Mr. Hauck: —

"*X Q.* 1. Mr. Hauck, you have been acquainted with Drawbaugh for a number of years, have you not?

"*A.* About ten years. [That is, from 1869.]"

"*X Q.* 3. He is a machinist, is he not?

"*A.* That is one of the trades he is proficient in.

"*X Q.* 4. Then he is a man of versatile talent?

"*A.* He is.

"*X Q.* 5. And a born inventor, is he not?

"*A.* That I cannot say, as I have only known him for about ten years.

"*X Q.* 6. You are aware that he has made a great many useful and ingenious inventions, are you not?

"*A.* What he has made since I have become acquainted with him, that I have any knowledge of, I would call imitations, though some of them might be patentable."

Then the subject was pursued on cross-examination through about five printed pages, Mr. Jacobs, with the assistance of Mr. Drawbaugh by his side, asking Mr. Hauck in substance, "did he not invent a measuring faucet, and you say that was an imitation?" "Did he not invent a magnetic clock, and was that an imitation?" and so on, winding up with the question (p. 257):—

"*X Q.* 52. And you undertake to say that Daniel Drawbaugh is an imitator and not an original inventor?

"*A.* I believe him to be an excellent imitator, while I do not say that he could not be called an inventor."

This was an issue introduced by Drawbaugh; if he had once said to Hauck, "Do you not know that when you carried on your business in my machine shop in 1873 and 1874, two or three years before speaking telephones had been heard of elsewhere in the world, I had practically operative speaking telephones?" he would have carried the point he was laboring on with that witness, and silenced him at once — *if such things had been there.*

He raised an issue as to whether he was an inventor of originality, and adducing various things which this witness, a fellow-occupant of his shop, might be supposed to know about to support that issue, *he never once named the telephone.* This is a distinct admission by act and by word that Hauck did not know of its existence, and that nothing existed in 1873, 1874 and 1875 which could leave in the mind of any frequenter of that shop the notion that Drawbaugh had invented such a wonderful instrument.

Afterwards Drawbaugh testified in the same interference. So sure was Hauck that Drawbaugh had never produced anything which was original in conception and successful in practice that he dared Drawbaugh to name one; and here again Drawbaugh enumerated some twopenny things, but did not mention any telephone. Drawbaugh's cross examination in the faucet case, which he has read over and says he cannot change (defts, ii, 1070), contains the following (complts, iv, exhibits, 142):—

"*X Q.* 103. You say in answer to Q. 43, in substance, that up to

within a year you have not been able to secure any parties to invest capital in the enterprise with you: was not that because parties, by reason of your repeated failures to perfect a machine, regarded your conceptions as chimerical?

"[*Objected to by M. W. Jacobs, Esq., of counsel for Daniel Drawbaugh, because there is not a particle of evidence in this case that Daniel Drawbaugh ever failed to perfect any machine which he invented or undertook to construct, and the question, therefore, assumes that as a fact which is not a fact.*]

"*A.* It is not.

"*X Q.* 104. Since 1866, what machines have you conceived and perfected that have worked satisfactorily?

"*A.* To the best of my knowledge, I think that they all have. The nail machine gave satisfaction. I had it running in the works, but the nailers drove me out. The tram and red staff was a good machine, and adopted by a number of millers, and acknowledged by them to be a good machine. The magnetic clock I consider a good thing, but I am not through with experiments on it. I believe this last faucet is a good thing."

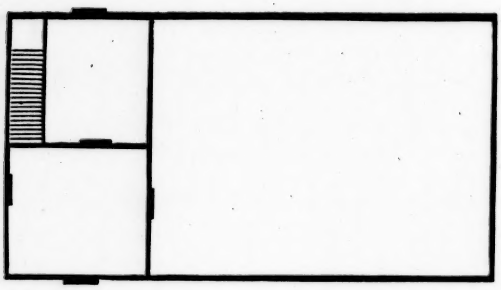
The positive fact of these cross examinations alone is *an admission by Drawbaugh* — not merely in words, but an admission certified to by his conduct, and preserved to us in writing and in print — that the fact which we called Hauck to prove in this case is a fact, viz., that in spite of his intimate relations with Drawbaugh and his knowledge of what went on there in the shop, *he never knew of any speaking telephone there because there was none.*

With reference to the partitions, Daniel Drawbaugh, in his deposition (defts, ii, p. 920), had correctly shown the condition of the partitions in the second story at one time. The diagram marked "Shop Diagram, No. 2," does exhibit the partitions of that story as it existed at one time, but Drawbaugh, while stating that he cannot tell when the change was made, rather thought it was before the Haucks went there. He is entirely mistaken about that, and David Hauck proved this as follows (complts, ii, p. 792): —

"*Q.* 39. Will you look at the diagram on page 921 of respondents' printed record, and state whether that shows the rooms on that floor as they were while you carried on business at the shop; and if not, in what respect they differed?

"*A.* It does not; the gangway, as shown, running from the north end of the building to the large room at the south end, was not there, and a partition running nearly east and west was continued to the corner of the northeast room; the partition between the gangway, as shown here, and the northwest room not being there."

Edward Nichols, who worked for Hauck in the spring of 1874, was inquired of about the partitions, and in testifying made the following sketch (p. 882): —



This correctly represents the partitions as they existed in 1873 and 1874.

David Hauck is supported by two witnesses, —

Davis Major (complts, i, 848), who worked for him at that shop in 1874, though but a short time, and never heard of telephones.

Edward Nichols (complts, ii, 852), who worked for him about two months in the spring of 1874. Nichols was a young man living about a mile from the shop, whom Drawbaugh seemed to have taken an interest in. He was occupied mostly in the upper story where Drawbaugh's own work was done. He saw several of Drawbaugh's inventions, and Drawbaugh took some pains to explain them to him and instructed him about his work. The witness is certain that he never saw a talking machine at the shop; that he never saw any of the instruments produced, and that if he had, he could not have forgotten it.

Long before the complainants went near him, he was solicited by

Drawbaugh to testify in his favor. His father, Samuel Nichols, was called and gave the extraordinary deposition referred to on p. 69, *supra*. When Drawbaugh first inquired of Edward on the subject he knew that his father was to be called. He was in Harrisburg some time afterwards, in the fall of 1881, while testimony was being taken, and Drawbaugh again talked with him then, took him to the office of Mr. Jacobs, defendants' counsel, then to Chellis's store, the "Ninety-nine Cent Palace," and showed him the instruments in evidence, which Chellis was keeping there, but the witness could remember nothing about them. The witness states all this and no one denies it. It cannot be denied; for they thereupon did not call him.

It is certain, therefore, that under the most careful examination by the defendants and their counsel and the exhibition of the instruments, long before the complainants went near this witness, he failed to find in his mind any recollection whatever of the alleged talking machine. He was cross-examined at great length, and savagely, but without the least impression being made on the correctness of his testimony. There are two or three things in the cross-examination that are worth noticing. The cross-examining counsel, knowing that Drawbaugh and the witness were good friends and had been intimate, asked him once whether Mr. Drawbaugh was not a truthful man, to which, of course, the witness, as most men would have done about any acquaintance under the circumstances, answered that he was. It is certain that Drawbaugh would have answered the same way about this witness. Then the learned counsel put him one question which was a little too much (p. 860): —

"*X Q.* 78. You do not believe that he would knowingly and intentionally misrepresent the facts concerning his telephone, however much it might be to his interest to do so, do you?

"*A.* That is a hard question for me to answer."

On cross-examination (pp. 876–878) an attempt was made to test his memory by asking him which of the exhibits had been shown to him on his direct examination two days before. Cross-examining counsel put question after question to him: —

"Is this one of the instruments that Mr. Smith showed you here day before yesterday, or not?" And because the witness could not certainly remember, cross-examining counsel undertook to draw

an inference derogatory as to either his veracity or his intelligence. It turned out that the person who was mistaken in the matter was the cross-examining counsel himself. Mr. Smith did not show the witness a single instrument; it was not Mr. Smith who conducted the examination, but another one of the complainants' counsel, and Mr. Smith was not present in the room at the time. This was noted on the record by the examiner at the close of this cross-examination (complts, ii, 882).

Here we have the most extraordinary fact, that the cross-examining counsel, who knew both of the gentlemen on the other side, and whose business it was to watch them carefully, elaborately cross-examined this witness through several pages under an entire misapprehension as to the person who was in the room two days before, and then desired to draw unfavorable inferences against the witness because the witness could not remember all the details of what had then taken place.

Samuel Nichols, this witness's father, had sworn that he went to Drawbaugh's shop in 1869, "with my son-in-law Samuel Bruce." We proved by this witness, and afterward by J. M. Speese, the officiating clergyman, that Samuel Bruce did not marry Mr. Nichols's daughter until the summer of 1876, and Samuel Bruce's first wife did not die until 1875. No. 45, *J. M. Speese*, complts, ii, 924, so testifies, and proves the marriage certificate, which is produced. (For all this in full see Samuel Nichols, p. 69, *supra*.)

This witness also testified that his father was opposed to Bruce's marriage with his sister, and that he never began to come to the house until he commenced to pay attentions to Miss Nichols, which was only a few months before their marriage. This must be accepted as an admitted fact, because Mrs. Bruce (now Mrs. Reynolds) and her mother, Mrs. Samuel Nichols, were afterwards called by the defendants in surrebuttal, and no questions were put to them on this topic.

The attempt was made during the defendants' surrebuttal to contradict Edward Nichols by calling his mother and sister to testify that they heard him and his father constantly speak about telephones at Drawbaugh's shop while he worked there. Unfortunately for the defendants, however, the father, originally called by the defend-

ants, was asked on direct examination and on cross-examination who he ever talked with about Drawbaugh's talking machine, and he named over several people, *but did not name his son*, and they did not venture to call him in surrebuttal. It is perfectly certain, also, that if Edward ever had talked with his mother and sister, or with his father about it, that fact would have been brought to his attention, and he would have been, by it, made to remember the talking machine when Drawbaugh called his father and wanted to call the son. These two women conformed to the usual performance of the defendants' surrebuttal witnesses.

No. 67. *Samuel F. Hauck*, complts, ii, 1160. — Tinsmith and hardware dealer, Mechanicsburg. He is a member of the firm of Hauck Brothers & Co., who bought out the faucet business in 1873. During 1873, 1874 and 1875 he was at Drawbaugh's shop more or less about this business. Saw a good many of his tools and various other things, and Drawbaugh talked freely to him about his inventions. This fact is a fact which Drawbaugh and Mr. Jacobs, his counsel, drew out from this witness while cross-examining him in the faucet interference depositions taken in the summer of 1879, which cross-examination contains the following (p. 1162): —

"*X Q.* 19. You and David A. Hauck frequently went to Drawbaugh's shop and talked with him on the subject of machinery, and of his invention, did you not?

"*A.* We were frequently there together, but did not go there together frequently, and talked to Drawbaugh about machinery, and his inventions.

"*X Q.* 20. He was very free and accommodating in giving ideas and hints on those subjects to friends who asked him?

"*A.* Yes, sir; he was.

"*X Q.* 21. And David A. Hauck and the members of your firm were always on friendly terms with him up to the time of this controversy?

"*A.* So far as I know they were."

They talked about many inventions, and the witness mentions a number of them which he saw and talked about (ans. 21, p. 1163). In the fall of 1876, or early in 1877, Drawbaugh spoke to witness about taking an interest in the electric clock, but the witness swears positively that Drawbaugh never spoke to him about his talking machine, and he never heard that he had one (p. 1164). He is sure

that, considering his frequent visits to Drawbaugh's shop, and the manner in which Drawbaugh spoke to him about his inventions, he would have heard of the talking machine if Drawbaugh had had a practically operative instrument. He testifies (p. 1161) : —

"*Q.* 27. State whether or not Mr. Drawbaugh at any time said anything to you about telephones or talking machines, or whether or not you saw any such machines at any time at his shop.

"*A.* He did not, and I never seen any at his place.

"*Q.* 28. State whether or not, in view of the fact of your friendly relations during the time that you carried on business at his shop, and of the freedom of his communication to you with reference to his inventions, you would, in your judgment, have known the fact if he had had in his shop practical speaking telephones capable of being used, which he freely showed to other people, and which were exposed to observation in his shop.

"*A.* I think I would.

"*Q.* 29. The sworn answer in this case contains this statement in reference to telephones or talking machines made by Daniel Drawbaugh: 'That some of the original machines and instruments, invented, made, used and exhibited to many others long prior to the said alleged inventions of said Bell, or either of them, are still in existence and capable of successful practical use; and are identified by a large number of persons who personally tested and used and knew of their practical operation and use in the years 1870, 1871, 1872, 1873 and 1874, and both subsequently and prior thereto.'

State whether or not, in your judgment, if such machines had been in existence in Drawbaugh's shop during the years that you were there, and had been personally tested and used by a large number of persons, who knew of their practical operation and use, you would also have known of their existence, and of their practical operation and use.

"*A.* I would have.

"*Q.* 30. The sworn answer also contains this further allegation: 'That said Drawbaugh's original invention was complete, successful, operative, and practically and successfully operated on many occasions, in the presence and hearing of many other persons; and knowledge thereof was freely communicated to the public by said Drawbaugh.'

State whether or not, in your judgment, you would have known the fact, if, while you were visiting Mr. Drawbaugh's shop, he had had a speaking telephone which was practically and successfully operated on many occasions in the presence and hearing of many other persons; and knowledge thereof had been freely communicated to the public.

"*A.* I would have.

"*Q.* 31. Will you look at the several instruments now produced

and laid on the table by the examiner, marked respectively 'A,' 'B,' 'C,' 'C reproduced,' 'D,' 'E,' 'F,' 'G,' 'H,' 'I,' 'J,' 'K,' 'L,' 'M,' 'N,' 'O,' 'P,' 'Q,' and state whether you ever saw them, or either them, at Mr. Drawbaugh's shop?

"*A.* No, sir; I never seen any of those."

The usual attempt was made to show that he had a controversy with Drawbaugh about faucets, and might have had hostile feeling to him; but that was put an end to by the fact stated in his answer 41, p. 1166, that within the last two or three years, and long since that controversy, Drawbaugh has come to him to have work done to the amount of $128, and he did it. He was cross-examined at great length as to exactly how often he went to the shop, but it did not vary his statement on direct examination that he went there a good many times, although he was not a very constant visitor.

He is certain that the first telephones he saw were string telephones seen at Mechanicsburg and made in his shop in 1877, and that he had never heard anything of Drawbaugh's at that time.

He was afterwards recalled at defendants' request (see p. 1180) and cross-examined, and on surrebuttal the defendants had two witnesses swear that at a which one (defts, iii, 180) guessed was in 1877, and which the other (*ib*, 219) guessed was "about 1876," they were at Drawbaugh's shop and saw a speaking telephone. Of course it would be purely immaterial if it were so.

The evidence of the witnesses against him is weak and contradictory, but the most interesting part of it is the explicit testimony of one of them, Jacob Kimmel (defts, iii, surbtl, 181): —

"*Q.* 14. Do you remember anything that Mr. Samuel F. Hauck and Mr. Drawbaugh said to each other on that occasion when you and Mr. Uhrich were present with him? If so, please state what it was.

"*A.* Mr. Hauck had asked Mr. Drawbaugh for a telephone or talking machine to take along home to put up — whether at his house or at his place of business I don't know — *and Mr. Drawbaugh said he didn't have any.*

"*Q.* 15. That conversation took place there while you and Mr. Uhrich were present, did it?

"*A.* Yes, sir."

[*For further details of this matter, see depositions of Kimmel and Uhrich in defts.' surrebuttal, infra.*]

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[*For further details of this matter, see depositions of Kimmel and Uhrich in defts.' surrebuttal, infra.*]

Axle Company. This was the next concern which regularly car-

ried on business at Drawbaugh's shop. They began to fit up the shop and put in machinery in January, 1875, and got started about Apri 1, 1875. They worked pretty regularly until the spring of 1876, when their manufacturing business became unprofitable, but continued to do some work, more particularly putting their patented bearing on reapers, until the fall of 1876. They occupied the upper story of the shop, altered the partitions, put up outside steps to lead to that story, and purchased and constructed $1,000 to $2,000 worth of machinery.

The presence of this concern in the shop covers the most important period in this case. D and E constituted the first practical apparatus, and it is alleged that they were made just when the Axle Company started; before it ceased its operations Mr. Bell had obtained his patent, and his memorable exhibition at the Centennial had made him famous in America and Europe as the inventor of the speaking telephone. All that Drawbaugh had was always well known, and if practical speaking telephones were not well known to all connected with that company, the defence must fail.

The company consisted of Capt. Moore; his father-in-law, Jacob Kline, the inventor; Wilson Baer and M. M. Grove; their foreman was Daniel Drawbaugh; their workmen were Daniel Drawbaugh, John B. Drawbaugh and Harmon K. Drawbaugh; Augustus Kahney and John Kahney did a few days' work. Their patent solicitor was Theophilus Weaver; during the year he reissued their patents, and carried on an interference for them, in which he used Drawbaugh as a witness.

Apart from the Drawbaugh family the testimony of all concerned is fatal to the defendants' case. For this in full see the body of the brief and also abstracts of depositions of J. A. Moore (pp. 204–9, *supra*); Baer (pp. 215–17, *supra*); Grove (p. 226, *supra*); T. Weaver (p. 3871, *supra*); Kahney (in surrebuttal, *infra*).

No. 28. *Cyrus Bowman*, i, 666. — He was the miller at Eberly's Mills from April 1, 1874, to March 1, 1876. He never knew anything of a talking machine, nor heard of any. He was a man whose relations with Drawbaugh were such that he would have heard of it if there was one; his character would have made him a good witness.

Before we saw him, Drawbaugh went to him to solicit his testimony, talked with him and his wife, and did not call them.

The fact therefore is that this witness, with every suggestion which Drawbaugh personally could make to him, does not remember that he ever heard of the existence of a speaking telephone at Milltown (p. 674), and yet he knew of a number of other inventions made by Drawbaugh (p. 673). Upon the question of the poverty of Drawbaugh he is a good witness for the complainants. He sold Drawbaugh supplies from the mill whenever he wanted them, and never had any hesitation in giving him credit for anything he desired (p. 668). Under some curious view of the law the defendants objected to this testimony as immaterial. They had called several witnesses who said in general terms that they considered Drawbaugh was poor. They had called one miller from a mill of three miles off to say that he had orders at one time to give Drawbaugh no credit, and yet when we call the miller of the mill in Drawbaugh's town, who of course knew his standing better than any one else, and asked him if he ever hesitated to give credit, and introduce his books to prove what he actually did do, the defendants object to that as immaterial.

The defendants in surrebuttal undertook to attack this witness's testimony by calling J. Porter Harris, brother, and Mrs. Swigert, sister of Mrs. Bowman, to say that each of them was at the Bowman house in 1875 and heard even the children of the Bowman family, children now dead, say that Drawbaugh had a talking machine and could talk from one part of his shop to another. Mr. and Mrs. Cyrus Bowman both were recalled by us (complts, rejoinder, p. 2008) and testified that that was a mistake and showed how the mistake occurred. It was the clock which the children talked of, and those witnesses under the spur of the present suit had mixed that up with the talking machine.

They also called Ramsey, J. P. (defts, iii, 1118), who testified that Cyrus Bowman, after he left the mill, brought a suit in his own name on a due bill of John B. Drawbaugh. It rather appeared from the manner in which that deposition was put in that the defendants had a fancy that they had got Bowman to swear on cross-examination that he and Mr. Geo. Leonard had a joint interest in the mill, or in its product, which to some extent was the fact, and that the

fact that Bowman held a due bill of John Drawbaugh for a few dollars, without any proof as to what it was taken for or the transaction it represented, was conclusive evidence that Bowman and Leonard did not run the mill on shares. It was not; this may have been a private debt; or for the miller's toll grain; or taken for a joint debt and set off to Bowman in settlement.

No. 48. *Benjamin Kauffman*, complts, ii, 939. — He was a near neighbor of Drawbaugh, living for twenty-five years, until February, 1878, close to Milltown and in Milltown. He then moved to Illinois. Although he had no very special occasion to go to Drawbaugh's shop, yet, like all the neighbors, he was in and out there from time to time, as he expresses it, "middling often." He knew of some things that Drawbaugh made, — clocks, for example, — but he never knew of any telephones, and never saw them. The first time that he ever heard of a talking machine of Drawbaugh's was after he moved to Illinois, some time in 1879 or 1880, when a neighbor, Jonathan Fry, one of the defendants' witnesses, came to see him and told him that "Dan was making talking machines."

An attempt was made to contradict Benjamin Kauffman by calling his daughter and son-in-law, Mr. and Mrs. Young, to say that they heard their father speak of a talking machine.

But they testify only to recollections of talk; after the constant gossip of the last four years they may well have confused talking machine with telegraph key, or "spelling machine" (alphabetical telegraph). Mrs. Young does not pretend ever to have heard any one else speak of it.

No. 49. *E. F. Harro*, complts, ii, 945. — A farmer; lived at Milltown, from March 1, 1875, to March 1, 1877; employed by Samuel F. Hertzler. He was then intimate at Drawbaugh's house, and visited there a good deal afterwards. Visited Drawbaugh's family during the year he lived at Mechanicsburg. He testifies (p. 946) that the house was well furnished, and that the family were as well provided for as any of the neighbors. He saw Drawbaugh's clock and telegraph key, and was, from time to time, in his shop, but never saw any telephone, and never heard of any; is quite sure he would not have

forgotten such a thing. The cross-examination was conducted on the usual principle of assuming that he would have been sure to have forgotten so important a thing as a telephone, because there were several small details which he could not distinctly remember.

Another variety of cross-examination was to ask him whether there might not have been a talking machine in the shop and he not know it. Of course there might have been one concealed and not shown, and he not known it; but the witness understood perfectly well what he was talking about, and he answered that he was sure that he had never heard about it, and then very correctly and intelligently said (p. 957): —

"*X Q.* 147. Assuming to be true [that witness never heard of one], still it does not follow that there were not plenty of them there; does it?

"*A.* I don't know as it does, but they would hardly have kept it as quiet as it was, as much as I was around Milltown."

No. 50. *Joseph Ditlow*, complts, ii, 959. — Was pretty frequently at Drawbaugh's shop for a number of years, from the time the shop began until the spring of 1877, though he spent several summers and one winter in the West. He remembered a good many of the things that Drawbaugh made, but he was certain that he had never seen nor heard of any talking machine.

The defendants afterwards got this witness, his brother Abraham, his sister, Mrs. Jacob Evans, and her husband, Jacob Evans, to testify for them in a manner and under circumstances which, as a whole, weaken confidence in the defendants' proofs and the defendants' case. We shall consider them together in connection with the defendants' surrebuttal, *infra*.

No. 51. *Abraham Ditlow*, complts, ii, 967. — His brother; was at the shop a good deal more, but testified in the same certainty that he never saw or heard of any talking machine there.

No. 52. *Jacob Evans*, complts, ii, 974.

Was miller at Milltown from September, 1875, until 1880, and somewhat at the shop. He heard of the talking machine for the first time during 1877. He testifies (p. 984) that he never saw any of

the exhibit instruments shown him; that he remembers about Christmas, 1877, seeing a wire run across from the shop to a little hill by the shop when he was cutting a spruce for a Christmas tree for one of his children.

When the defendants took their first testimony in 1881, he was summoned by them, brought to Harrisburg, taken to the counsel for the defendants; the instruments were shown him and he was questioned about them but had no recollection of having seen or heard of them, and was sent home without being examined. He afterwards testified for the complainants, Dec. 1882, to just what he had told the defendants' counsel when they examined him privately about it, — that he had neither seen nor known of the alleged talking machine.

Jacob Evans also testified about defendants' witness, D. Wesley Smith (for which see D. W. Smith, p. 25, *supra*). This was not contradicted.

In October, 1883, the defendants recalled him and tried to show that he had used a talking machine in 1875. (See surrebuttal, *infra*.)

No. 53. *Orlando Kahney*, complts, ii, 990. — Laborer. He was at Drawbaugh's shop a good deal from 1872 or 1873 until 1878 or 1879. He remembers quite well the different things he saw there, and remembers the first time he ever saw a talking machine there, which was, as he thought, in the fall of 1876. He fixed it by two circumstances: one was taking a boat ride with Drawbaugh's daughter and another young lady; another was something about the Centennial. It turns out from some circumstance that the boat ride could not have taken place until the fall of 1877, and it would seem probable that the witness therefore did not know anything of the telephone until the fall of 1877, though it still might be the fall of 1876. He did not talk through it then, but he does specify distinctly and explicitly the time when he first talked through it, which was in January or February, 1879, on the occasion of a particular visit for a particular purpose (p. 1013).

He also was recalled by the defendants, with the Ditlows. See abstract of testimony of Kahney family, in surrebuttal, *infra*.

These same four witnesses testified that Drawbaugh was as well

off as his neighbors, and his family in good condition (see Jacob Evans, p. 979; Orlando Kahney, p. 992). The latter witness knew well the condition of Drawbaugh's furniture, because he helped him to move twice, in 1876 and in 1877. This was not contradicted.

No. 134. *John Kahney*, complts, iii, 2034.—Age, sixty-six years; White Hill, one and a half miles from Drawbaugh's shop; father of Ira, Norman, Orlando and Augustus Kahney; cooper and laborer. In surrebuttal the defendants called Augustus Kahney (defts, iii, 254) and Orlando Kahney (defts, iii, 224), and had them swear that both of them had seen and one of them had used talking machines at Drawbaugh's shop. They also called George Hosler (defts, iii, p. 370), and had him swear in his twenty-fifth answer that it was impossible that anybody could have been at Milltown for a number of years before 1875 without hearing that Drawbaugh had a talking machine. They also introduced much cumulative testimony to the existence and notoriety of a talking machine at Drawbaugh's shop.

John Kahney lived in the village of Milltown from the spring of 1871 to the spring of 1875. He then moved to Martin Best's tenant house, a mile or a mile and a half from the village; lived there until the spring of 1879, when he moved to White Hill, about two miles from Milltown. His principal work was coopering as a journeyman for Peter Row, just on the edge of Milltown. He was frequently at Drawbaugh's shop, "say about fifty times in the four years" (ans. 15, p. 2035). He knew everybody who lived in the village; was in the habit of spending evenings at the store; knew George Hosler, whose shop was next door to the witness's house; used to be in there occasionally. Never heard any talk in his family, nor from anybody in the village, that Drawbaugh had a talking machine. When the Axle Company was moving in (early in 1875) he helped them to hoist in their machinery. There were at that time no outside steps leading to the second story (p. 2039). Knows Drawbaugh's office room; has been into it. In the time of the Axle Company there were two rooms at one end, and the rest of that upper story was open; at the time of

the Clock Company it was divided into four rooms (p. 2039). At Drawbaugh's shop, while he lived in the village, he saw the "electrical clock," "an eight-day clock that run by electricity," "an alarmer," "a revolving alphabet," "a self-feeding nail machine," "what he called a barmometer," "faucet," "hydraulic ram," "an emery stone run by water power, that he said he made himself," "a machine to wrap wire with." "The alarmer was a square block with a kind of a thing on that, and you touched that, and it would ring a little bell"; "the barmometer was a thing with a round face on it and fingers and a hand"; Drawbaugh said "that the inside was made of two different kinds of wood, hard and soft"; "I think he said ash and linden" (p. 2040). This is evidently the wooden weather gauge or hygrometer, such as was put in evidence in the deposition of H. S. Rupp.

He was cross-examined at great length; chiefly to test his memory. On p. 2042 he was asked about the people who lived at Milltown, and whom he saw at the shop. Among others he saw William Heck and Emanuel Dietz and John Heck, three men who then lived at Milltown. He testified on redirect examination (p. 2057), that Dietz and Heck now live in Milltown, and that the John Heck referred to is brother to George B., and settled George B. Heck's estate; and it appears in the deposition of Amos Frownfelter (complts, ii, 1226) that George B. Heck and his estate owned Drawbaugh's shop. The importance of this is, that the defendants called John Heck (defts, iii, surbtl, 892) and did not ask him anything about telephones. They have not called William Heck, although he is accessible. They have had several witnesses state what they heard Emanuel Dietz say, and they have not called Emanuel Dietz, although he is accessible. The Court must assume under the circumstances that these three men know nothing about telephones; it is certain that John Heck knew nothing about them, or he would have been asked.

His cross-examination was chiefly an attempt to test his memory, and showed that it was peculiarly distinct and sharp. Moreover, he had the faculty of distinguishing between what he distinctly remembered and what he did not remember; it is evident throughout his

cross-examination that he has testified from a very distinct specific recollection. After he moved away from the village to Martin Best's house, he visited the shop very little (p. 2047); what he did see during that time, however, he distinctly remembers with detail. Thus his cross-examination (p. 2043) gives such a description of the two clocks he saw there that there can be no doubt his memory is clear about them. The room where he saw this clock was in the south-east corner of the upper story (p. 2051). That, upon reference to the arrangement of the partitions at the time of the Clock Company, has been shown to be the room where the clocks were kept after the principal part of the work on them was done. On pp. 2052–3 he again describes the arrangement of the rooms, and which of them he passed through, and the things he saw there; that must be from memory, because they have all been torn away since then. It was after the spring of 1879, and apparently in the spring of 1880, that he first heard that Drawbaugh had a talking machine; he then heard it from his son Norman (p. 2056). The first time he ever heard that anybody had a telephone was between the Centennial and 1879, after the Centennial; his sister, living in Philadelphia, sent him newspapers regularly, and in one of them he read that "there was a man in the east, in Boston, had put up a line of wires and had it patented and called it the telephone." "The papers said it was eighteen miles long"; "I don't remember what place it was to, Concord or Providence." The paper gave two names of the men who had the telephone; "they were Bell and Watson" (p. 2057). Upon looking at Mr. Watson's deposition (complts, i, pp. 254–5), it is evident that what he read was an account of the line which Mr. Bell and Mr. Watson used between Boston and Salem in the spring of 1877, stated in the article to be eighteen miles long, though in fact it is sixteen, perhaps mixing it a little with the one which, a short time afterwards, they used to Providence.

This man shows much more than common intelligence and memory. The facts that he had such opportunities to know what was going on and that the defendants have not called him are perhaps enough. It is difficult to get over such a deposition. He has not only positive recollection that no such thing was talked of or heard of as a talking

machine, but he has also a positive recollection when and how he first heard of any contrivance of the kind.

No. 56. *W. Sadler*, complts, ii, 1036.— Age, fifty-eight; retired farmer; knew Drawbaugh well for many years. He was a member of the Mill Bush Company, which in 1868–9 had their work done at Drawbaugh's shop. There were only three active members, and Mr. Sadler was there a good deal about the work. They raised about $1,500, and spent most of it in Drawbaugh's shop, very largely upon special tools and machinery which Drawbaugh designed and got up for them.

Mr. Sadler was a man of means, worth $20,000 to $30,000 (Mumper, complts, ii, 1101; p. 466 *infra*); appears to have had a good deal of taste for patents. In 1871 he furnished money to his son, Jacob Sadler, to go into partnership with Drawbaugh upon hydraulic rams. Afterwards Drawbaugh did some work for him in putting up piping for steam apparatus; yet during all these years he never heard anything about Drawbaugh's alleged talking machine.

An attempt was made to contradict him, *first* by introducing an alleged *ex parte* affidavit of his son, Jacob Sadler, now dead, to the general effect that when he was Drawbaugh's partner, Drawbaugh had a talking machine. The paper is, of course, incompetent for many reasons. It is not entitled of any cause; it purports to be sworn to only before a justice of the peace; but, more than all, it is an *ex parte* affidavit drawn by counsel, identifying no instrument, too vague in itself to be of any value, and introduced for the first time after the death of the alleged affiant.

Two attacks were made upon Mr. Sadler in surrebuttal. One Jacob Barber was produced (defts, iii, surbtl, 374), who said that he heard Mr. Sadler speak of the talking machine in 1878. Possibly, — but that of course is totally immaterial, inasmuch as Mr. Bell's patent was in 1876.

Another witness, B. F. Zimmerman (defts, iii, surbtl, 823), testifies that at a sale — the date of which he cannot fix, but which he supposes to be about 1870 — he overheard Mr. Sadler and Mr.

Wilson Walters speaking together about Drawbaugh's talking machine. Mr. Walters was one of the defendants' own witnesses, whom they called to fix a date for another purpose, and did not ask about the telephone. Before calling Zimmerman they asked Walters whether Zimmerman's story was true, and Walters told them it was not, but they still persisted in using him.

Of course such testimony is not only weak in itself, but no case that had any strength, or thought that it had, would waste time and space in introducing it.

We thereupon called Mr. Walters in rejoinder, and he testified accordingly (complts, iii, 2029).

No. 61. *George W. Heiges*, complts, ii, 1089. — A lawyer; forty years old; of York.

No. 62. *Mumper J. Bailey*, complts, ii, 1095. — Corn and coal dealer; thirty-nine years old; of Dillsburg.

No. 63. *George W. Mumper*, complts, ii, 1098. — Fifty-four years old, of Lower Allen township; a farmer.

The two first named are nephews of Mr. Geo. W. Mumper. Mr. Mumper has lived twenty years a mile and a quarter from Eberly's Mills. He has been prominent in local politics; supervisor, school director for thirteen years, president of the school board for twelve years, and recently two years in the Legislature. Thinks he knows everybody in the township, and has been in the habit of going around with various candidates when making their canvass. He has known Drawbaugh twenty-five years, and until quite a recent period never heard that he had a speaking telephone. Never saw any of his instruments. Never heard that Drawbaugh was too poor to provide properly for his family, and does not believe it. He made a visit to Drawbaugh, March, 1878, with his two nephews, particularly to see Drawbaugh's clock. They were shown the clock and spent some time in the shop. Mr. Geo. W. Heiges had formerly been a teacher in Milltown, but Drawbaugh neither showed them any talking machines nor spoke of any. Of course it is possible that he had some telephone instruments at that time;, but it is not possible that if he were the first inventor of the speaking telephone, and had such perfect instruments as he pretends, he would have talked with an old

friend like Mr. Heiges, capable of appreciating such things, and never alluded to the subject; nor is it possible that Mr. George Mumper, a near neighbor and friend and an active man, could during all those years have been ignorant of it. Mr. Mumper and he were of the same political party. Drawbaugh, while preparing the case, went to him to ask for his knowledge on the subject, but found he knew nothing of any telephone, and did not call him (p. 1105).

Mr. Mumper testifies (p. 1100) that Lower Allen township is a rich farming country, and he names some of the neighbors: Mr. Fred. Sheely has a farm of 100 acres, for which he has just been offered $300 an acre, and he owned three other farms, being worth in all from $50,000 to $75,000. His brother, John Sheely, is worth $20,000 to $30,000. Mr. S. F. Hertzler's farms adjoin the village, and are worth $30,000 to $40,000. Wm. R. Gorgas's farm is a first-rate farm; he is worth $80,000 to $90,000. Wm. Sadler, up to 1875 or thereabouts, was worth $20,000. John F. Hursh took about $30,000 with him when he moved to the West. Henry S. Rupp "is very well fixed." All these were friends of the claimant. Fred. Sheely's son has recently married Drawbaugh's daughter (Jos. Ditlow, defts, iii, surbtl, 530). All the others had invested money in Drawbaugh's enterprises or enterprises carried on at his shop. Farms around there average $200 an acre. The witness's farm is worth over $200 an acre. Martin Best owns 400 acres, though a good deal of his land is not worth as much as that.

This witness, who was in a better position to know the current knowledge of the community than almost any one else, testifies positively (pp. 1102–3) that if Drawbaugh had had a practical talking machine which he had shown freely to any considerable number of persons before such things had been heard of elsewhere, it would have been known in the community, and that it could not have been generally known without his knowing of it. If Drawbaugh had had such a thing in his shop, and had demonstrated its utility by actual practical use and wished to obtain a few hundred dollars to patent it, he would not have had the slightest trouble in obtaining it. Witness would have indorsed for him at any time to raise fifty or a hundred dollars without security. Joseph, Abraham and Alfred Ditlow

worked for the witness at various dates from 1872 to 1875. This witness, although not a frequenter of Drawbaugh's shop, is a peculiarly good index of the general knowledge of the community.

He then produced the books of the school board and testified to some matters about books which have a bearing upon the deposition of D. A. Hamacher, a witness for the defence, and which are stated p. 86. *supra*.

This witness has been attacked on surrebuttal, as follows: Joseph Ditlow (defts, iii, surbtl, 521) and Abraham Ditlow (defts, surbtl, 876) were called to testify to statements alleged to have been made by this witness in the middle of January, 1883. They stated that they, together with one John Free, had a conversation with Mr. Mumper, which they fix as about Jan. 8, and that in that conversation he admitted knowledge of Drawbaugh's alleged talking machine; at least that is what they were desired to swear to, but their testimony is so different as to be worthless.

Joseph testifies (defts, iii, 524): —

"*Q.* 27. What did Mr. George W. Mumper say at that time about Drawbaugh's talking machine?

"*A.* He says, 'Well, you are in this telephone scrape.' I says, 'Yes, sir.' He says, 'How do you think it's going to go?' I told him that I thought Daniel Drawbaugh would win it. He said, 'I think so'; that he had it in 1874."

Abraham was kept by the defendants under pay, hanging around with other witnesses, and at the defendants' expense, for over three months before he testified; his memory grew; and nearly two months after his brother's deposition he testified (p. 882): —

"*Q.* 49. Will you state to us what that conversation was, as you remember it?

"*A.* We went down there, and Mr. Mumper was out at the barn doing his feeding; and he was very glad to see us; and he showed us his stock. He brought out a very nice horse that he had, and said that he was looking for a buyer to come and take him away. Then he said he thought it was strange when he heard that we was in Philadelphia and testified against Drawbaugh; we told him that it was a good while, and we had forgotten it; and he said that he had been up in Daniel Drawbaugh's shop in 1874 and seen the talking machine, and Dan wanted him to go in partnership with him; and he said he was a damn fool, — if he had went in with Dan he would have made his fortune."

According to him not only Mr. Mumper remembered seeing it, but had talked with Drawbaugh about it and considered the question of going into partnership with him. The two stories of that interview of course are inconsistent. Moreover, they are clearly untrue. Joseph and Abraham Ditlow are very seriously impeached witnesses, to say the least, and there was a third person present at this interview, Mr. John Free, whom the defendants do not call.

Again, the occasion on which this conversation is alleged to have taken place was fixed by their return home, as about the 8th of January, 1883; about a week from that time, that is, on inauguration day, Jan. 16, 1883 (complts, ii, 1109), Mr. Mumper was brought to see the complainants' counsel, and gave such an account of his recollection that it was immediately determined to summon him, and he testified on Feb. 5.

It is a little too much for human nature to believe that a man of Mr. Mumper's acknowledged character and standing in the community could on the 8th of January have said that he had seen talking machines and knew about them, and been asked to put money into them, and on the 16th of January could voluntarily have stated to the complainants, and a fortnight later have testified, that he never knew anything of them, — when such testimony was, as he says himself, against his desires, because Mr. Drawbaugh was an old friend of his, and he would like to see him win. Moreover Drawbaugh had visited him long before, had talked with him, and had not called him.

Another witness called against him on surrebuttal was *Alfred Ditlow*, No. 142, defts, iii, surbtl, 820. But Alfred Ditlow is an admirable witness for the complainants. His case is considered on p. 189, *supra*, and in the surrebuttal *infra*, and is this: He was born and brought up within a quarter of a mile or half a mile of Drawbaugh's shop; married a daughter of Daniel Drawbaugh's brother John; has known the claimant for fifteen or twenty years so intimately that Drawbaugh once came to him to borrow money, — and yet the defendants do not ask him whether he ever heard that Drawbaugh had a telephone. It must be taken that he did not.

Alfred Ditlow's testimony is that at some time or other — he is not even asked to fix the date — Drawbaugh asked him to lend

him a small sum of money for a patent, and he is not asked what the patent was for. He did not lend him the money.

At another time, — the year of which he cannot fix at all, except that it was in a year when he painted a barn for Mr. Mumper, — being at work on Mr. Mumper's farm quarrying stone, Drawbaugh came into the field and called Mumper aside and they talked, and he went away. Then Ditlow asked Mumper what Drawbaugh wanted, and he said he wanted to borrow some money; and Mumper told him he had not the money to spare. The witness had previously told him to go to Mumper for money; that he thought he could get it. Naturally enough, for Mumper was just the man Drawbaugh would have applied to to advance money on the telephone if there had been such a thing, and there is not a pretence that he ever was asked for money for *that* purpose, or that any request was made to him, except a general request at one time to lend some money.

Mr. Mumper was cross-examined on something which we suppose was intended to mean this interview, but the description in the questions of counsel (complts, ii, 1106–7) is so distinctly different from that given by Ditlow that it must either be believed that Ditlow is all wrong about it, or that Mr. Drawbaugh's instructions to his counsel were all wrong. But whichever is true, it does not make out anything for the defence. Mr. Mumper was not willing to swear that he was certain that Drawbaugh never asked him for any money, but he does not remember his doing it, and does not remember the matter in question. He says that he was a ready lender, though he says that a request might have happened to come when he had no money on hand. The request stated in the defendants' question was for $10. It is not pretended that it was for a telephone.

The defendants next attempted on Mumper's cross-examination to drag Mr. Comfort into the record, and all they got out of it was the following (complts, ii, 1108): —

"*X Q.* 56. Had you never talked to Mr. Comfort about this case prior to the 16th of January, 1883?

"*A.* I think there was one time that Mr. Drawbaugh told me that Comfort was working against him, and asked me to talk to John about it; and I did talk to John, and tell him that he oughtn't to work against Mr. Drawbaugh in his telephone business; I didn't

know then that he was really working against Mr. Drawbaugh, only what Mr. Drawbaugh said.

"*X Q.* 57. Instead of Mr. Drawbaugh asking you to talk to John about it, was it not you who voluntarily offered to talk to John about it?

"*A.* No, sir; because I didn't know anything of it till Mr. Drawbaugh mentioned it to me, that John was against him.

"*X Q.* 58. Did not Mr. Drawbaugh first mention it to you, and then you offer of your own accord to speak to Mr. Comfort about it?

"*A.* The first part of the question I will answer yes, and the last part no."

It then appeared on further cross-examination that Mr. Comfort and the witness had been political enemies.

No. 64. *Abraham L. Rupp*, complts, ii, 1111. — Age, forty-one years; now laboring at the steel works, but he carried on farming at various times. He has known Drawbaugh all his life, and has lived during part of the period under inquiry at the "Lake Spring farm," about a mile and a half from Milltown, and the rest of the time at Shiremanstown, three miles from Milltown. He has been at Drawbaugh's shop from time to time, generally going to Milltown for his milling and his blacksmithing.

He heard a talking machine at Drawbaugh's shop, and he remembers well the first time he ever heard it. It was when he went to get the knives of a corn-fodder cutter ground, and this cutter was bought in December, 1877. Witness also testified that according to the best of his recollection this was in the winter of 1877 and 1878. He heard a few words through the machine, but he cannot remember them. He cannot identify any of the machines. He had never heard before that Drawbaugh had one, but before he heard of Drawbaugh's, and before this visit, he had talked through a string telephone at Shiremanstown, made out of a cigar box and a tin can, with a bladder and a string. He is sure that he used the string telephone at Shiremanstown before he heard of Drawbaugh's. It is proved that string telephones were used in the neighborhood as novelties in 1877 and 1878. He testifies that if Drawbaugh had had practical talking machines before speaking telephones were heard of elsewhere, he would have had no trouble in raising the money to

patent it. He himself has invested money in patents,— one hundred and twenty-five dollars in one patent.

Besides the visit referred to, he went, from time to time, to the shop to get work done for his farm.

He testifies to some incidental matters: One is that Mr. Samuel M. Hertzler never had but one parlor organ; another is, that 'Squire Henry M. Bowman, of Camp Hill, the person employed by the defendants as justice of the peace to take affidavits, is a son-in-law of Capt. Moore. His cross-examination developed the fact that he remembered with great accuracy various things about Drawbaugh's shop, but he was not able to state the exact number of times he had been at the shop in any particular year. He saw in Drawbaugh's shop a contrivance for ringing bells by electricity, and a contrivance for telegraphing, and he describes it as "a box with a lot of those wires fastened to it. It had a magnet in it." He thinks this was prior to 1877.

No. 65. *George C. Rupp*, complts, ii, 1122. — A nephew of Abraham L. Rupp. Lived for a good many years within a mile and a half of Drawbaugh, and a part of that time within half a mile of Drawbaugh. Was at the shop during the time of the Pump Company. Was there particularly in 1877 and 1878, and while there, sharpening the knives for his uncle's corn-fodder cutter, he heard Drawbaugh speak through a talking machine. Thinks the one that he listened at was A.

That was the first time he had ever seen any talking machine at Drawbaugh's shop, or heard of any.

His companions among the young men of the neighborhood were William Fettrow, Hiram Ditlow, Abe Ditlow, Orlando Kahney, Norman Kahney and Ira Kahney.

No. 79. *Jacob Neidig*, complts, ii, 1235. — Age, twenty-six years; keeps a store in Harrisburg; lived with his father, Mr. Harry Neidig, about a mile from Eberly's Mills, and at Shiremanstown, two or three miles from Eberly's Mills, from the spring of 1870 to the spring of 1877.

Was at Drawbaugh's shop from time to time to get work done for

his father, and for other purposes, and as a matter of curiosity, Drawbaugh showed him a good many of his inventions, which he enumerated (p. 1238), but he never saw any talking machine, and never heard of any (p. 1239). Witness says that if Drawbaugh had had any which he was in the habit of showing, his relations with him were such that he would have seen it.

His cross-examination was long, but there was nothing either in that or in the surrebuttal to shake his testimony. It would be possible that Drawbaugh might have had a talking machine at his shop secretly, or so as not to attract attention, without the witness knowing of it; but the witness is quite certain that he could not have had such a one generally exhibited and the witness not have seen it, and as the witness very pertinently says himself (ans. 177, p. 1252), "as I have remembered things of less importance, I feel sure I would have remembered that."

No. 89. *Harry Neidig*, complts, ii, 1520.— Testifies to the same effect. Both of these witnesses, though not very constant visitors at the shop, knew all that was common talk in the neighborhood, and were at the shop often enough to have seen anything there which attracted attention.

Neidig was a man of some means. Drawbaugh and Sadler put in a ram for him in 1871, and he had a good deal of piping done for that and to carry water and steam to different parts of his premises. Both he and the son are very sure (p. 1527) that if Drawbaugh had ever had a telephone and wanted to get people to take it up before they were known elsewhere in the world, he would have had no trouble in obtaining aid.

Henry Herr, defendants' witness (pp. 228, 229, *supra*), had sworn that he put in a ram in 1869, and heard of it from his cousin, Harry Neidig, who had one in. Neidig did not put one in until 1871, and he produces the bill for it. This bill is interesting for another purpose. It is a bill made out by Drawbaugh in the name of *Drawbaugh & Sadler*, dated June 10, 1871, and Drawbaugh testified that he and Sadler were in partnership only one year; this fixes the year 1871 as the year when Drawbaugh painted "Sadler's wagon,"

as it is called, for use in this partnership ram business. (See for this pp. 188–9, *supra*).

Witness testifies that the ram on John Stephens's place was put in after his. This is important in connection with the testimony of John Stephens, inasmuch as there has been some attempt to fix an alleged visit to Drawbaugh's shop by the alleged date of Stephens's ram; but Stephens stated merely from memory, without anything at all to guide him by, while Drawbaugh did not venture to give the date when he put it in.

No. 77. *Amos Frownfelter*, complts, ii, 1225. — Age, forty-eight years; farmer. The defendants in their testimony in chief called Amos Frownfelter, who was a resident at Eberly's Mills from April, 1871, to April, 1874. They did not ask him about telephones, but only as to the date when he moved the remains of an old saw mill. Of course we soon ascertained that they had inquired of him about telephones, and wished him to testify about them, but he had never seen any. He lived in the village three years, in one of the houses nearest to the shop, between the shop and Drawbaugh's house. He was not often at the shop, but was there from time to time, as it belonged to Geo. B. Heck, on whose farm he lived and worked. He never saw any talking machines and never heard that Drawbaugh had any while he lived there. He first heard of talking machines from his son-in-law, George Reed, in 1878.

No. 78. *William C. Frownfelter*, complts, ii, 1229. — Age, twenty-five years; son of Amos; testified to the same effect as his father, except that he was at Drawbaugh's shop very much more. The defendants endeavored to show by his cross-examination, and afterwards in surrebuttal, that he told Geo. H. Rupley in 1875 or 1876 that Drawbaugh had a talking machine. Frownfelter positively denies it.

Geo. H. Rupley was called by the defendants in surrebuttal (p. 660), and testified that Frownfelter then "told him that Drawbaugh had a wire strung along the fence above his shop, used for the purpose of speaking or transmitting speech." It is the memory of a witness testifying to an alleged conversation nine years back, *with the fur-*

ther fact that Rupley is a stockholder in the defendant corporation, and the still further fact that Drawbaugh never did have a wire so stretched for such a purpose. Drawbaugh describes the circuits he used, but does not describe that.

No. 88. *Daniel Hart*, complts, ii, 1512. — Age, sixty-six years. Mr. Hart is an old resident of Milltown; was not very often at Drawbaugh's shop, but knew him and knew all that was commonly known in the village. He swears positively that the testimony of David Good, that he heard Drawbaugh tell the witness at Good's store that he had a talking machine, is not true. It was elicited from this witness on cross-examination that Mr. Drawbaugh sometimes worked in the shop at night; and the further remarkable fact was elicited, that what Mr. Drawbaugh did in his shop at night secretly, when the witness was not there, was not known to the witness. There is a great deal of cross-examination of that kind, but it has no bearing on this case; for the allegation in the answer, and the whole tenor of the evidence for the defendants, is, that all that Mr. Drawbaugh accomplished about telephones was publicly made known and was common talk in the community whenever it was.

No. 90. *George Row*, complts, ii, 1533. — Age, twenty-three years; laborer. This witness was born at Eberly's Mills and lived there until 1876, when he was sixteen years old. His father has lived there ever since. He was at Drawbaugh's shop more or less, knew generally what was going on in the town, and never heard of any talking machine.

In the spring or summer of 1876 he was hireling to John Stephens, the witness who testified for the defendants (defts, i, 260, p. 77, *supra*).

There was one of Drawbaugh's rams on that farm, and during that season Stephens went to Drawbaugh's shop to get some part of the ram repaired. On the next day Stephens asked the witness whether he had heard of Drawbaugh having a talking machine, and he said that Drawbaugh had first told him of it the night before.

(For this matter see abstract of deposition of Stephens, p. 77, *supra*.)

No. 15. *William Natcher*, complts, i, 500.

No. 16. *Michael H. Natcher*, complts, i, 510.

William Natcher, age sixty-eight, Carlisle, ran the grist mill at Eberly's Mills as lessee from April 5, 1860, to Sept. 5, 1870; then he ran the mill as miller for George Leonard from Oct. 17, 1871, to Aug. 9, 1872. He was called in the first place as to his accounts with Daniel Drawbaugh. Daniel Drawbaugh in his deposition while seeking to account for uses which he made of the large amount of money received from the Faucet Company and which it was alleged prevented him having any left to patent his operative and successful telephone, stated that he paid a considerable part of it for debts contracted before 1867. On cross-examination he was only able to name two parties to whom he made such payments; one of them was Zacharias & Graybill, and the other was William Natcher, the miller. We have proved elsewhere that the firm of Zacharias & Graybill did not exist until 1869 (p. 492, *infra*). William Natcher testified and proved by his book that he did not know Drawbaugh until 1870; that his whole dealings with him in the course of two years only amounted to $13.29, and that most of this was paid for by labor, and only $5.27 by cash. (See for all this p. 351, *supra*.)

Natcher was also "frequently" at Drawbaugh's shop while he lived in Milltown, and Drawbaugh was frequently in the mill. He never heard that Drawbaugh had a talking machine, never saw any of the exhibit instruments, but knew of other inventions which Drawbaugh had.

Michael H. Natcher, his son, testified that he worked for his father at the mill in the winter of 1871 and 1872; that he was often at Drawbaugh's shop and saw him often at the mill; that he never saw any talking machine, and Drawbaugh never mentioned the subject to him. By an accidental oversight the witness was not asked in terms whether he ever heard any one else speaking about it. He was not cross-examined.

The respondents in their surrebuttal undertook to overthrow this testimony, and it must be admitted that they successfully destroyed the characters of these two witnesses, but it was done in such a way as to injure the defendants' case much more than the plaintiffs'.

They called William Natcher, his sons, Michael and George, his

wife, and his daughter, now Mrs. Blanche Bella Spangler (defts, iii, 135).

Michael H. Natcher, defts, iii, surbtl, 135. — The defendants' examining counsel undertook to preserve an appearance of consistency in this witness along a very narrow line by noticing that in his original examination for the complainants, while he stated that he was often at Drawbaugh's shop, seeing him every day and never seeing a talking machine nor hearing of one from Drawbaugh, he was not asked in terms whether he heard of them from anybody else; and thereupon the defendants' counsel proceeded to examine him, as if it were true that he had never heard of it from Drawbaugh personally, but as if the complainants' counsel had known that this witness had heard of it from others and had carefully refrained from asking the question. The falsity of this contemptible insinuation was shown by the witness himself, because while he first mentioned certain persons other than Drawbaugh whom he alleged had spoken about it, he afterwards, in his fifteenth answer, stated expressly as follows: —

"*Q.* 15. Did Mr. *Drawbaugh* ever say anything to you about his talking machines whilst you live there?

"*A.* He told me that he had a machine invented that he could talk over the ocean, and I said that was a pretty big thing. I was busy at the time, and didn't say no more to him about it, nor him to me."

Michael said that his brother George told him that he had talked through it at the shop, and that his sister, then a little girl about ten or eleven years old, said she had been lifted up to talk through it. But this witness stated in terms that he never heard anybody speak of it in the community while he lived there, except only his brother and sister and Mr. George Leonard; this upsets the defendants' allegations that for four years it had been the subject of universal talk in the village and for ten miles around. His testimony as to what he heard and did not hear from these persons is as follows (defts, iii, surbtl, 136): —

"*Q.* 5. Whom did you hear speak about the Drawbaugh talking machine?

"*A.* I heard my brother, George Natcher, and my sister, Bella Natcher, and my mother and Mr. Leonard.

"*Q.* 6. State whether or not you heard the persons named speak of it whilst you were living at Eberly's Mills, and your father was running the mill in 1872 or prior.

"*A.* Yes, sir.

"*Q.* 7. If you remember, will you state what your brother George said about it at that time?

"*A.* He was down at the shop, and he came up to the mill and told me he talked through the talking machine from the lower story to the upper story, down at Mr. Drawbaugh's shop.

"*Q.* 8. Can you remember what your sister said about it at that time?

"*A.* Her and a couple of other little girls were down to the shop and Mr. Hiram Drawbaugh was there; and my sister saw this thing up against the wall and she asked him what that was; and he said it was to talk through. And she asked him to lift her up, — it was pretty high, — and whether she darst talk through it; and he did so.

"*Q.* 9. I understand you to mean that she told you this whilst you lived and worked for your father at Eberly's Mills; am I correct?

"*A.* Yes, sir.

"*Q.* 10. Who first came to see you with regard to your knowledge of Drawbaugh's talking machine?

"*A.* Mr. Storrow.

"*Q.* 11. How long before you were called to testify for the complainants was that?

"*A.* I can't just say the time of year, but it was some time in the spring or along there; I don't just remember.

"*Q.* 12. Will you state whether or not you then told him that you had heard of Drawbaugh's talking machine whilst you lived at Eberly's Mills and your father ran the mill there?

"*A.* I told him I had heard of them, but I had never seen them.

"*Q.* 13. I understand that at the time of that visit you told Mr. Storrow that you had heard of Drawbaugh's talking machine whilst you lived at Eberly's Mills in 1872, or prior. Is that correct?

"*A.* Yes, sir; that is what I told him the time he was down.

"*Q.* 14. You have spoken of your brother and sister and Mr. Leonard speaking to you of the talking machines at the time you lived at Eberly's Mills. I wish to ask you whether or not the talking machine was spoken of by others in the community at that time?

"*A.* Not more than Mr. Leonard. He said that Mr. Drawbaugh had a talking machine, and we ought to have one in the mill, to the house."

Mr. George Leonard, the mill owner, had been the defendants' witness and had testified that he heard the thing spoken of some time between 1872 and 1876, that is in the period including those years, but could not tell when. He was called for the complainants on

another point, and the defendants then cross-examined him about the talking machine, and the result was that he testified that he should not be willing to say that he had heard of it before the year 1877 (p. 238, *supra*). It was of course impossible to expect any one to believe that Drawbaugh had proposed or that Leonard had proposed that a talking machine should be put in from his mill to the house, and that during two years of this controversy such a fact, more important than almost anything else told about it, should have been forgotten by all the parties concerned, *including the claimant*. For the failure to ask Leonard about it either in direct or cross-examination, shows that two years and a half after this controversy began, not even Drawbaugh had any recollection of such an occurrence. The Natcher story on its face is a falsehood. It is, moreover, practically absurd to expect anybody to believe that the miller of the grist mill, whose house was across the road twenty or thirty feet from the mill, should be the one man of all Drawbaugh's acquaintances during eight years who seriously proposed to put in a telephone, and this only to enable his wife to call him to dinner, when she could accomplish the same purpose much better by putting her head out of the kitchen door.

In rejoinder we called Mr. Leonard. He testified (complts, iii, 2298): —

"*Q.* 4. Did you ever say to either of the Natchers or in their presence that Drawbaugh had a talking machine and that one of them ought to be put in from the mill to the house, or anything to that effect?

"*A.* I never did to no living person, because I knew nothing about it at that time."

This witness Michael Natcher undertook to say that he informed complainants' counsel when first visited that although *Drawbaugh* had never spoken to him about a talking machine, he had heard of it from others while he lived at Eberly's Mills in 1872, insinuating that, knowing this, the complainants had caused him to swear to what was a literal truth but a substantial falsehood. The complainants' counsel was therefore obliged in self-defence to read to the witness the notes which the counsel made of the interview immediately afterwards as follows (defts, iii, 138): —

"[Natcher said] Never saw a telephone, and never heard of Dan's telephone till he heard he had a suit about one, a year or two ago. Mr. Natcher says that if he had known of a talking machine there, he certainly would have remembered it."

The witness, though he shuffled and evaded, said in substance that he could not deny this.

This witness, therefore, tells a story which contradicts and is afterwards explicitly contradicted by the defendants' respectable witness, George Leonard, which is substantially contradicted by Drawbaugh's silence on the subject and his manner in examining Mr. Leonard, and which is absurd on its face; he prefaces it by a pretence as to his interview and disclosures to the complainants' counsel, which is false.

William Natcher, defts, iii, surbtl, p. 149. — He begins with the pretence also, that April 14, 1883, he received from the complainants a printed copy of his former deposition, and that reading it over brought to his mind that he had been entirely mistaken; that he had heard about the talking machine while he lived in Milltown; knew that it was generally spoken of; heard his daughter and son George speak of it; heard Daniel Drawbaugh, Harmon K. Drawbaugh, George Leonard, George Heck, David Good, George W. Kissinger and Daniel Hart speak of it. He says (ans. 13, p. 150): —

"During my time there he [George Leonard] told me I should get Drawbaugh to put up a talking machine there, from the house to the mill, to call me to my meals. I told him if I was certain of staying there any length of time, I would like to have it put up."

George Leonard, in the passage already quoted, explicitly and in terms denies that anything of the sort ever took place. Natcher says that he did not know he was going to testify until the night before he came to Harrisburg, and he had not received any money for witness fees or expenses in coming down. Of course that is false.

George Natcher, defts, iii, surbtl, 141. — Bar-tender; testifies that he lived with his father at Eberly's Mills in 1871 and 1872; that Harmon Drawbaugh showed him a talking machine at the shop;

Harmon talked with him and he talked back; understood what was said. He was on the lower floor and Harmon on the floor above him. Used to hear Drawbaugh's talking machine spoken of at Drawbaugh's house when he visited them, and in his father's family; his father and Mr. Drawbaugh and his mother were speaking about the talking machine, and they wanted his father to get one from his house to the mill to call them to their meals, but he never got it. Heard it spoken of by a good many.

Cross-examination: Their house was just across the road from the mill. The reason why his father did not put up a talking machine was that he moved away too soon; at least he supposes that is the reason. Often heard Drawbaugh speak to his father about it; heard his mother speak about it. The first time he lived at Milltown heard that Drawbaugh had a talking machine, but did not see it until he moved there the second time. Thinks it was the summer of 1872, when he talked with Harmon; he and Harmon were on the upper floor where Harmon was working, and he went down by himself and found the machine according to Harmon's direction and they talked. Had often seen it before; generally in the same place; the machine was in plain sight; it appears that the machinery was running. The New York tests show that, apart from other impossibilities, the noise would have prevented talking. He says he was first spoken to about testifying by Henry Drawbaugh the day before he came on the stand.

Mrs. William Natcher, defts, iii, surbtl, 174. — Drawbaugh's talking machine was well known in her family while they lived at Milltown. George and Bella and Michael spoke of it; Michael said that Leonard said it would be a very nice thing to have it to talk from the mill to the house.

Mrs. Blanche Belle Spangler, defts, iii, surbtl, 176. — Age, twenty-two years. When she lived with her father at Eberly's Mills in 1872 she knew of Drawbaugh's machine at the shop. Harmon Drawbaugh lifted her up while she spoke into it. She was then about ten years old. It was an ingenious notion that a little girl too young to testify could become qualified by waiting eleven years.

The Court will observe the testimony of William Natcher, the

father, to the effect that he believed that he was right when he testified for the complainants, but that the recollection of the talking machine came to him afterwards. It will be impossible to reconcile that with the pretence of his son and co-witness, Michael Natcher, that he knew all along that it had been talked of; for, if that be true, he spent two days at Harrisburg encouraging his father to testify to what he knew was a falsehood.

But the defendants tried too much with this family and got them into another trouble. They undertook to show that Mrs. Spangler and the family, before the father was called to testify, had told the complainants' agent that there were talking machines at Drawbaugh's shop and that they knew it; and they had Mrs. Spangler (p. 177) swear that she told all this story to Mr. Comfort the first time he came to see her father about it, a month or six weeks before her father testified. On cross-examination it appears (pp. 177, 178) that her father, her mother and her husband were all present at this interview.

If the family then believed what they now say they believed at that time, William Natcher's testimony was a deliberate perjury, perpetrated with the knowledge and concurrence of his family.

This family may divide the responsibility as they please. It is certain, however, that nothing of that kind took place, because from the interview at which these things are alleged to have been said the complainants' agent brought Natcher to the complainants' counsel, and it was immediately determined to put him on the witness stand and he was called. Clearly the truth is that when the Natchers testified for the complainants the whole family believed what the two said. They have been induced to come back and swear to a pretended recollection, which is nothing but a falsehood.

There are certain witnesses who will be considered separately in connection with the hydraulic ram put upon the Draper farm at Marysville, but who also have important knowledge bearing upon the question of the telephone. These are George W. Kis-inger and his family.

No. 19. *George W. Kissinger*, complts, i, 551.

No. 20. *John M. Kissinger*, complts, i, 575.

No. 22. *George Frank Kissinger*, complts, i, 582.

No. 87. *Cyrus Kissinger*, complts, ii, 1463.

No. 27. *James C. Zimmerman*, complts, i, 622.

The store keeper at Eberly's Mills from the spring of 1871 to the spring of 1874 was George W. Kissinger. He kept the country store, which was frequented as a place of gossip in the evenings and particularly Saturday evening. He knew Drawbaugh, and from time to time he and his family went to the shop, and if there had been a speaking telephone there he would have known of it. If it had been common talk in the neighborhood it would have been talked of in his store during most of the years. Before the complainants began to prepare their case the Kissinger family were visited by the defendants. The family so visited consisted at the time of this visit of George W. Kissinger, the father, his son, George Frank Kissinger, who lived with him, another grown-up son, Cyrus Kissinger, who lived at Marysville, about eight miles from Harrisburg, and a son-in-law James C. Zimmerman, living also at Marysville. Each and all of them told the defendants that they knew nothing of the talking machine, and had not heard of it. Being called for the complainants, they repeated this upon the witness stand and show that they had a very fair memory of different things that existed at Drawbaugh's shop.

It is certain, however, that the question of remembering the talking machine, if it existed, if it was practically operative, and if it was common talk in the community, attracting a great deal of attention, as the defendants allege, cannot be a question of a little better or a little worse memory; it is something that no person could possibly have forgotten. And it is enough for us that the defendants, visiting these witnesses before we saw them, ascertained for themselves, as has since been made known to the Court, that these witnesses had not heard of it and knew nothing of it.

George W. Kissinger also testified about the Leonard-Drawbaugh-Kissinger note as stated on pp. 241–2, *supra*, and pp. 493–4, *infra*.

Another witness, neighbor of Drawbaugh, who proves that telephones were not known to any of Drawbaugh's neighbors, is *George Ditlow*, called by the complainants in rejoinder for this and other

purposes (complts, iii, 2124). His testimony will be considered in connection with the Ditlow family in defendants' surrebuttal, *infra*.

Another is *William Darr* (complts, i, 358), who lived at Milltown until 1871, and, hearing Drawbaugh's other inventions, never heard that Drawbaugh had a talking machine. He had been visited by the defendants before the complainants went to him. (For his testimony see p. 489, *infra*.)

Certain of the complainants' proofs in reply were directed to specific details of the defendants' evidence in chief.

Money matters misstated by Drawbaugh in his deposition.

The claimant actually received in cash in 1867–1876 about $10,000. $5,000 of this was from the sale of patents, and $1,200 of it was from the resale in 1876 of a house bought in 1868 out of that money. This was in addition to his earnings as a jobbing machinist. During all this time he owned real estate, and during part of the time he owned one sixth to one ninth of the stock of the Drawbaugh Manufacturing Company. There could have been only two reasons for not patenting a telephone — want of money or want of a telephone; and only the latter could have prevented him from making and offering for sale a few duplicates. The defendants acknowledge that there could be no other reasons, and in the answer set up abject poverty is the only one. The actual facts destroy their only pretence, for with such resources and so much cash passing through his hands he could have raised or retained $60 for the purpose. The way of inventors from the time of Palissy is well known.

The defendants tried to break the force of this by showing that he spent the money — so he did, but not on telephones. He chose to spend it for other purposes which arose from time to time. It was his will and not his necessity which governed him, and so the inquiry is immaterial and of no legal value. But, whatever be its importance, the defendants fail in it. Three days of Drawbaugh's direct examination were devoted to this subject. His memory was

wretched and plainly unreliable, but in his list of payments we have shown errors and falsities enough to furnish means for patenting a telephone fifteen times over. Some of this specific proof is as follows: —

George D. Miller's death and the apple speculation. — Drawbaugh testified (defts, ii, 871) that in October, 1867, having received considerable money for his faucet patents, he took a fancy to invest $400 in a speculation in apples, and gave that amount to a neighbor who was going to the State of New York to buy apples on joint account. This man, George D. Miller, was killed on the cars the day after he left Harrisburg, in the middle of October, 1867, and Drawbaugh testified that it became necessary for him to send an undertaker up to bring home the body and search for the $400, which he had furnished the man with; that the authorities at Williamsport, where the man was killed, seized upon the money, and out of it paid the expense of the inquest, the coffin, transportation, etc. His story turns out to be entirely untrue, and the defendants proved it by the following testimony: —

No. 7. *Harvey W. Whitehead*, complts, i, 351. — Clerk to the county commissioners at Williamsport. The coroner's inquest, produced by him, states that at the time of the inquest on George D. Miller, Oct. 15, 1867, there had been found upon the person of the deceased $394.40, which at the time of the inquest was in the possession of R. C. Swan, foreman of the jury; the records of the county prove that the county paid all the expenses of the inquest, as by law it is required to do.

No. 8. *Abraham Page*, p. 355. — Undertaker at Williamsport; furnished the coffin, etc., and did the undertaker's work, and was paid by the railroad on which the man was killed. His books show this.

No. 9. *William J. Broderick*, p. 356. — From the auditor's office of the Northern Central Railway; produces the voucher showing that the railroad so paid.

No. 10. *William Darr*, p 358. — Was an undertaker at Eberly's Mills for many years before 1870; was a brother-in-law of George Miller, went up to Williamsport for his body, and brought it down to Bridgeport. He received from Mr. Swan, foreman of the coroner's jury, the money in question, brought it to Eberly's Mills,

and gave to Drawbaugh the whole of it just as he received it. Swan came down from Williamsport with him, having some business in Harrisburg. Drawbaugh was at no expense in the matter except for half of the witness's expenses, the other half of them being paid by witness himself. The whole amounted to about $7.50, Drawbaugh's share being less than $4. Darr testified that he did not count the money, but received it from Swan rolled up, put it in his inside pocket, handed the package without opening it to Drawbaugh, and never heard any complaint that any of it was missing.

P. 366. "*Q.* 96. After you had given him the money which you brought from Williamsport, did he ever complain to you that there was near a hundred dollars of it missing?
"*A.* No, sir; he didn't."

Darr testified also that he was tolerably intimate with Drawbaugh, living at Milltown for twenty years before 1870, and was from time to time at Drawbaugh's shop. That he never saw any talking machines there and never heard of any. On cross-examination he testified that upon one occasion Drawbaugh said to him that the time was coming when people would be able to talk across the sea, and the witness said, "Oh, take the Yellowbreeches first!" and he thought the man must be crazy to suggest such a thing; but Drawbaugh did not say that he was going to do it, or had a machine that would do it (complts, i, p. 365):—

"*X Q.* 91. Didn't he say, also, that he was going to do it, or had a machine that would do it?
"*A.* No, sir; he said nothing of the kind."

No. 54. *R. C. Swan*, complts, ii, p. 1020. — Now lives in California. He testified that he was the foreman of the jury; that he found upon the body $394.40, which was in his hands at the time of the inquest; that William Darr presented himself with an order from Drawbaugh claiming to be the owner of that money, and from the widow of Miller and other proper authorities entitled to dispose of the body, and he thereupon delivered the body and the said money to Darr. He thinks he got a receipt on the back of the order, but cannot find it, and it is destroyed. No part of that money was used

for any purpose. It was all paid to Darr. Witness does not think that Darr used any of it. He accompanied Darr with the body to Bridgeport, and Darr did not expend any of the money on the way. He came with Darr to Harrisburg on a pass given by the railroad, watching Darr a little carefully because he was afraid that the order might not be correct, and he felt responsible for the money, and he kept with him until one of the neighbors or friends of the deceased came with a wagon to the Bridgeport station, where they left the cars, and then he satisfied himself about the genuineness of the order and left them.

This evidence, of course, is conclusive. The defendants have not pretended to meet it.

The defendants produced in surrebuttal *Mrs. Mary M. Darr*, the wife of W. Darr, who testified that about the time he gave his deposition she separated from him, and that he had been an intemperate man in 1868 and since to such an extent that, in her opinion, his memory was impaired (defts, iii, 112). His daughter, *Mrs. Brenneman*, and her husband, testified in the same way, rather ungraciously and clearly untruthfuly, for upon their marriage and during the time when they represent him as a broken-down drunkard, they went to live with him—from 1872 to 1875 (Mrs. Brenneman, ans. 10, defts, iii, 104, and J. M. Brenneman, ib, 115).

His daughter, *Mrs. Brown*, testified, but very moderately, in the same direction (defts, iii, 163). She did not seem willing to join in the assaults upon her father's character as freely as the others did. The character of these persons and their testimony will be considered with the defendants' surrebuttal. It is enough now to say that it confirms Darr's story about the Miller money. The Darr family and the Miller family were brothers and sisters, and lived close to each other in a little village, and close to Drawbaugh. If such a thing had happened as the loss of that hundred dollars, known to Drawbaugh and to Darr at least, it would have been known to and talked about in these two families, if none others. And if the Darr women could have been brought up to the sticking point, they would certainly have sworn that they heard of the loss and knew of it at the time. They were not interrogated upon the subject at all, which of course is an admission, inasmuch as they were

called to contradict Darr upon other points, that upon this they knew of nothing inconsistent with his story; and, more than all, the defendants have not ventured to put Drawbaugh on the stand to contradict it. They have not ventured to put him upon the stand where the complainants, now they have knowledge of the truth of this matter, could cross-examine him about it.

One other person certainly would know of the story if it had any foundation. Mrs. Miller, the widow, sister to Mrs. Darr, still lives at Eberly's Mills. The defendants called the son Henry Miller, who said that he lived with his mother at Eberly's Mills. *They did not ask him about it nor call the mother.* (For relationship of these parties see Henry Miller, defts, iii, surbtl, p. 441, and Geo. Ditlow, complts, iii, 444)

The statement made by Drawbaugh that his money was used for the purposes indicated is absolutely proved by the papers to be untrue.

It does not become the defendants to attack Darr's character; for while the defendants were taking their own testimony they went to Darr to become a witness for them, and it was only after he had told them that he had never seen the alleged talking machine and after he had testified on the stand to precisely what he told them when they saw him before the complainants knew of his existence, that the defendants discovered that they ought to pretend to the Court that he was an unfit person to be a witness; but throughout all this attack upon him, neither his family nor any one else had suggested that he was ever suspected of being dishonest or untruthful.

Proof about other payments alleged by Drawbaugh.

In his direct examination he testified (defts, ii, 876) : —

"*Q.* 487. At the time when you sold the interest in the pump patent to Mr. Gorgas and others, as you have testified, did you owe any debts growing out of old transactions prior to that time, or not?

"*A.* Yes, sir.

"*Q.* 488. Did you use any of the purchase money paid you by Hertzler, Gorgas, Rupp, Hursh or Sheely, in payment of those old debts? If so, to what amount, to the best of your recollection and knowledge?

"*A.* Yes, sir; I did use money out of them payments; the amount I am not prepared to say, but to the amount of a thousand dollars or more, I am positive."

On cross-examination he said (defts, ii, 1117): —

"*X Q.* 1749. In your answer to Int. 488 on p. 876, you speak of using a portion of the money you had from Hertzler and others in payment of old debts, to the amount of a thousand dollars or more. To whom did you make those payments?

"*A.* I don't remember to whom; I generally had a great many debts of different kinds, — store bills and bills for flour, coal and wood, fuel, — I could not just enumerate, and I could not enumerate the parties I paid it to.

"*X Q.* 1750. Can't you name any of the parties to whom you made those payments?

"*A.* I might name some, but I made payments more than once; if I have to go by the time when I got the money — I can't recollect who had the warehouse where I got my coal — Graybill & Zacharias; I know I paid them for coal; there was a party went by the name of Natcher, who run the mill; I know I paid him about that time; as near as I can recollect there were store bills of parties that had stores; I paid them some money."

The defendants tried to repair damages on redirect examination, but without effect (p. 1119): —

"*X Q.* 1759. Mr. John K. Taylor, on printed page 662 of defendants' record, testifies that you paid him between two and three hundred dollars, balance of an old debt that you owed him for some years, and that you made the payment in September, 1867; do you remember whether that was out of the money that you received from the Faucet Company?

"*A.* I don't remember; it may have been; I can't remember the different payments."

So all that he can specify, after two years of preparation, to support the allegation of payments for old debts contracted before 1867, are alleged payments to "Graybill & Zacharias" and to Natcher. We have already shown by Natcher (p. 479, *supra*, and complts, i, 502–3) that he had no dealings with Drawbaugh before 1870, and that $5.27 was all the cash he ever received from him.

We prove by

No. 82, *W. Lewis*, complts, ii, 1262, that the firm of Graybill & Zacharias was not formed until the spring of 1869, and that

Graybill before that had lived in a distant part of the county. The defendants called Graybill for other matters (defts, iii, surbtl, 184), but asked him nothing about money dealings, and the defendants, though they called nearly two hundred and fifty witnesses since, have introduced no proof upon the subject of the alleged old debts.

No. 73. *George Leonard*, complts, ii, 1199. — This was a witness called first by the defendants to prove Drawbaugh's alleged poverty, and he testified for them in general terms that Drawbaugh was a poor man (see p. 236, *supra*).

We recalled him to prove, among other things, that he never had the slightest hesitation in trusting Drawbaugh for supplies from the mill; that upon one occasion he discounted Drawbaugh's note for sixty dollars without any security other than the name of a joint promisor who was known to be entirely irresponsible, the transaction being that Mr. Leonard bought the note, and when Drawbaugh did not pay it at maturity, instead of pressing him for the money, Mr. Leonard lent him more and sold him more supplies until the debt reached over a hundred dollars. (See for this pp. 241–2, 325, *supra*.)

The defendants were kind enough to bring out on the cross-examination of Mr. Leonard, that although he was one of the wealthiest men in Milltown, — owning the mill and perhaps half the houses in the place, — all he ever knew about Drawbaugh's talking machine was that at some time or other he heard something about it, but he would not like to say that it was before 1877. Yet he was so intimate with Drawbaugh that they went together to the Centennial, and there is no pretence that even at the Centennial anything was said to him about it, nor that Drawbaugh ever applied to him for aid.

Mr. Leonard's whole testimony is fully set forth in connection with the abstract of his first deposition (pp. 237–9, *supra*) and in connection with the Natchers, p. 482, *supra*.

Drawbaugh (defts, ii, 887, 894) alleged that he gave a note to George Leonard for $60, April 26, 1863, and paid it, so far as he can remember, in the summer of 1873, out of the $425 he received from the sale of the Faucet Company to the Haucks (p. 887), and that he afterwards gave another note to Leonard, dated Dec. 31, 1875, for

$103 (p. 894) and paid it by instalments, the first of which was in 1878, and that he also paid George Leonard for flour and feed from the mill $40 to $60 in the spring or 1876 (p. 893). The facts are that the first note, for $60, represented what Drawbaugh owed the storekeeper, G. W. Kissinger, and Kissinger took it in payment upon Leonard's agreement to cash it, which he did do, because he knew that Drawbaugh was financially responsible. Kissinger (complts, i, 557–8), Leonard (complts, ii, 1201), testify positively to this, the books of Leonard's mill support them, and no one contradicts them. (See pp. 241–2, *supra*.) In December, 1875, Drawbaugh owed Leonard $39.03 for flour, etc., got during the previous eighteen months, and before Dec. 20 he paid $24.10 in cash. The account produced by the miller, Cyrus Bowman (complts, i, 671), gives these figures and facts. The final credit was "Dec. 31, cash to Leonard, $14.93." On Bowman's cross-examination (p. 675) the defendants represented, and it appears to have been probably the fact that he either paid that to Leonard personally, or arranged it in settlement with some notes. The ultimate fact, however, was that the note of $60 was not paid in cash, but that note, with other debts for flour and feed, and some cash loaned, were settled by taking the note of $103, Dec. 31, 1875, for the whole. Leonard so testifies (complts, ii, 1201) and no one denies this. Finally, instead of paying Leonard "forty, fifty or sixty dollars" in April, 1876, out of money received in that month from the sale of his house and from Capt. Moore, as Drawbaugh expressly testified on direct examination (ans. 575, 577, defts, ii, 893), all that he owed Leonard at that time was $7.43, and it does not appear when this was paid. See the book entries produced by Bowman, Leonard's miller (ans. 40, complts, i, 673).

Could testimony be more worthless? The payments he swore to are twice what were made; $60 of the Hauck money received in July, 1873 — enough to take out a patent — was *not* paid to Leonard; instead of $50 or $60 of the Fettrow money and Moore money, not over $8.00 could have been paid to Leonard, and there is no proof that any was; and the *facts* prove that Drawbaugh's credit was so good that Leonard was ready to cash his note, and when that

was not paid, lent him more and took a new, unsecured note for the whole.

All this is part of the story alleged in the answer, and these details were deliberately put in after preparation, and sworn to by the claimant, on whose veracity the case hangs.

Is he a deliberate liar? Does he recklessly assert as true what he only guesses at? Is he a man who seeks to swear to whatever he thinks his counsel think will help his case? Certainly he is not a witness who ought to be believed, testifying in his own behalf; and the defendants are as reckless in their allegations as he is in his testimony.

He says (defts, ii, 883) that he used between $300 and $400 in repairing his house about 1868, and that he thinks he might be able to find bills which would tell the Court the truth about it. He never produced them. Did he look for them and think he had better not produce them? We fortunately got hold of one of them. He got his lumber — amounting to about $65 — from Lee & Eberly, and paid for it by work he had previously done for them; he admitted this (defts, ii, 1021, cross-ans. 1220). As they still owed him, it is not likely that he got any lumber elsewhere. Nor is it likely that the labor amounted to more than the lumber.

The falsity of the defendants' story of his dealings with Lee & Baylor, especially with reference to alleged poverty, has been exposed on pp. 47–50, *supra*.

His melodramatic falsehood about selling furniture to Reneker because he had no other means to get food for his family has also been exposed on p. 73, *supra*.

Witnesses about the defendants' witness *Urias R. Nichols*.

No. 33. *Levi Maish*, complts, i, 741.
No. 34. *George C. Maynard*, complts, i, 746.
No. 35. *Jacob S. Kunkel*, complts, i, 749 and 767.
No. 36. *Joel Gochenaur*, complts, i, 756.
No. 37. *Elijah S. Kunkel*, complts, i, 761 and 769.
No. 40. *M. S. Crull*, complts, i, 779.
No. 46. *T. C. Blair*, complts, ii, 926.
No. 69. *H. Kintz*, complts. ii 1185

No. 71. *W. Peck*, complts, ii, 1194.

These witnesses are called to rebut and overthrow the testimony of the defendants' witness, Urias R. Nichols (defts, i, 93). (For a discussion of their testimony and its precise effect, see abstract of deposition of Urias R. Nichols, pp. 29–33, *supra*.) Generally stated their testimony is as follows: —

Nichols testified that he went to Drawbaugh's shop at a date which he said was January, 1875, and never was there except at one visit; saw the instrument "A," and was told by Drawbaugh that it had been made about sixty days; saw instruments "B" and "F," and was told by Drawbaugh that he had had them three or four years; he did not see "D" and "E." The fact is that his visit was made in the first half of 1878. This is proved as follows: —

He testified that he fixed the date as January, 1875, chiefly by the fact that on the day of his visit he bought some lime at Hakes's lime kiln, and it was delivered a few days afterward, and he said that he had at home a memorandum that it was delivered on the 18th of January, 1875. He did not produce that memorandum, and the defendants never have produced it, but he said he looked at it a day or two before testifying. Henry Kintz had charge of Hakes's lime kiln for many years before and up to April 1, 1876. He produced the books, and he, fortified by the books, testified and proved that he never saw Nichols at the kiln, and never sold any lime to him or for him, or to be sent to his place. This has not been denied, nor has the pretended memorandum ever been produced.

Nichols testified that he went to Drawbaugh's shop in consequence of seeing articles in the Harrisburg newspapers about Drawbaugh's electric clock, and we proved by J. L. Weaver and his sisters (pp. 366–8 *supra*) that the earliest newspaper articles about the clock were in the Harrisburg papers in January and February, 1878, except a mention of it, without any description, published by Holsinger, in the Carlisle *Mirror* for Nov. 16, 1876 (*q. v.* p. 107, *supra*); even that was ten months after the date alleged for Nichols's visit, and there is no pretence that he ever saw it. Nichols says (defts, i, 99): —

"*X Q.* 67. What was it that you saw in the paper about the clock?

"*A.* Account of a clock invented by Drawbaugh that was run by electricity, and required no winding."

The Harrisburg *Telegraph* article of Feb. 1, 1878 (complts, iv, exhibits, p. 386), says: —

"You will find Mr. Daniel Drawbaugh busily engaged in manufacturing his wonderful clock which will run for centuries without winding or other adjustment."

Drawbaugh admitted, on cross-examination, that he knew of no articles about the clock except those enumerated by us, and none others are produced.

Nichols testified that, during the same season in which he made his only visit to Drawbaugh's, he spoke of the talking machine to Col. Levi Maish, a lawyer, of York, and then a member of Congress. *Col. Maish* (complts, i, 741) remembers that Nichols did tell him about it, and described the clock that he saw there also; but that before that he (Maish) had seen and talked through a Bell telephone at Washington, at the extra session of Congress in the fall of 1877. He described the time, place and circumstances, and *Mr. George C. Maynard* (complts, i, 749), electrician, proved by his recollection and his books that the line was up upon the occasion named and at the place named, being the first permanent telephone line ever put up in Washington, and among the persons who talked over it were Col. Maish, Mr. Robeson, Mr. Blaine and others.

Nichols also testified that he spoke of the talking machine to his neighbor, *M. S. Crull*, whom he met in town when Crull was buying bolting cloth for his mill. *Crull* (complts, i, 779) testified that he bought a bolting cloth for his mill in 1872; did not buy another before 1878 or 1879, but that Nichols never spoke to him on the subject ever. Nichols said that the conversation with Crull arose from his suggestion to Crull that he had better have one of Drawbaugh's patent trams which he (Nichols) had seen at Kunkel's mill. J. S. Kunkel, owner of the mill, Joel Gochenaur, Elijah S. Kunkel and W. Peck, his millers, testify that they never had a Drawbaugh tram at Kunkel's mill.

T. C. Blair of Maryland was called to show the dates when Nichols worked in Maryland running an engine at an ore bank.

Samuel Nichols, defendants' witness, testified (defts, i, 238, p. 70, *supra*) that in company with "his son-in-law, Samuel Bruce," he

talked through a talking machine at Drawbaugh's shop, and he describes the way in which the rooms were arranged at the time. He alleges that this visit was in 1869. Bruce did not become his son-in-law until June 10, 1876, when he married Miss Annie Nichols, about a year after the death of the first Mrs. Bruce. The families had substantially no acquaintance before. The arrangement of rooms described did not exist until 1875. (For the details of this, see Samuel Nichols, pp. 70–2, *supra*, and Edward Nichols, p. 456, *supra*.)

No. 72. *Wilson N. Miller*, complts, ii, 1198. — This witness, called by the defendants, had stated in a very general way, the year when he first knew of Drawbaugh's alleged talking machine, but upon direct examination he stated specifically that his first knowledge of it was before the time when he saw it, and was when he went to collect some money which Drawbaugh owed his father for coal sold on credit.

We recalled him, had him produce his books, and proved that the first sale to Drawbaugh was in December, 1876; and that the first time he collected any money was in April, 1878. His subsequent inspection of an instrument was of course later than anything that could affect the Bell patent. The details of this are given in connection with his first deposition, p. 221, *supra*.

Defendants' witness Decker.

No. 94. *J. R. Spong*, complts, ii, 1558.
" 95. *J. P. Wilbar*, complts, ii, 1559.
" 96. *C. W. Pike*, complts, ii, 1561.
" 97. *Jacob May*, complts, ii, 1563.

These are considered in connection with the deposition of Decker, pp. 253–6, *supra*. The deposition of Jacob May, however, has a positive and affirmative value of its own.

No. 97. *Jacob May*, complts, ii, 1563. Age, forty-eight; West Fairview, Cumberland County, Pa., about five or six miles from Drawbaugh's shop; carpenter; has known Drawbaugh twenty years. He went to Drawbaugh's shop a number of years ago, but cannot tell exactly when; went with David Stevenson, a machinist of Harrisburg, for

the purpose of trying to borrow some money from Mr. George Leonard. It must therefore have been between 1871 and 1878, because Leonard only lived there between those years. Drawbaugh took them to Leonard's house and introduced them to him. It rather appears from the house which Mr. Drawbaugh went to on that occasion as if it were his own (ans. 89, complts, ii, 1564), that it was the house opposite the mill which Drawbaugh lived in from the spring of 1876 to the spring of 1877. The next time he went to Drawbaugh's shop was with the defendants' witness, Decker, and it was not in the same year as the visit with Mr. Stevenson, but in a subsequent year. The thing which particularly attracted his attention on the occasion of that visit was a Shephard lathe which he afterwards mentioned to Mr. Pike, and he and Mr. Pike went over to look at it; Mr. Pike, as he testified, having a notion of getting one. Mr. Pike says that as well as he can remember (p. 1562), this visit of himself and Mr. May was in the fall of 1878. Mr. May says that it was in that year, and he fixes the date by the fact that a discussion there took place between the miller and Decker about greenbackism, the issue during the campaign for the election of governor of Pennsylvania in that year. It appears to be reasonably certain, therefore, that it was in the fall of 1878 that Decker and May went there together, and Mr. May's recollection is, though he is not absolutely positive about it, that the occasion of his going there with Decker was the mention of a clock on exhibition at Harrisburg (Decker had stated that he saw such a clock on exhibition, and that led him to go and see Drawbaugh's clock) and the fact mentioned between them that Drawbaugh had a remarkable clock. Now the exhibition of this clock in Harrisburg has already been proved to have taken place in the beginning of 1878. The defendants had been to this witness to see if he did not know something about the talking machine, and the results of their visits to him were, that he can identify "A," he thinks, as the one that he saw upon the visit which he and Mr. Pike made in the fall of 1878.

On cross-examination he again repeats this, and says that he cannot remember having seen H, or C, or P, or D, or E, and heard no talk through them while at his shop.

Mr. Pike testifies that on his visit, nothing, so far as he remembers, was said, or done, or shown about the talking machine.

No. 76. *J. L. Weaver*, complts, ii, 1221. — He and his two sisters, Miss S. R. Weaver and Miss E. R. Weaver, were employed to search the local newspapers and extract therefrom various articles which were printed. The main purpose of these articles was to show that although Drawbaugh was known as an inventor, there was nothing in the papers about any telephone connected with him until he was spoken of in 1878 as the inventor of some improvements in telephones; also to show that Mr. Bell's invention was mentioned in all the local papers extensively, and also to fix various dates of occurrences and matters of common notoriety. These publications are referred to in the different places where the complainants particularly desire to use them.

No. 80. *J. D. Raffensburger*, complts, ii, 1262. — He is the dealer who sold a parlor organ to Mr. Samuel Hertzler in the summer of 1875. It became desirable to fix the date of this in connection with the testimony of the defendants' witness, Peter C. Zimmerman, for which see the abstract of that deposition (p. 119, *supra*). H. S. Rupp and A. L. Rupp, friends of Hertzler, confirm this. Hertzler was one of the defendants' witnesses. The date we proved is not denied.

No. 47. *S. N. Emminger*, complts, ii, 929. — He is clerk for the county commissioners; was for a long time deputy sheriff; he was called by us to prove some questions of geography, the substance of which is shown by the map put into the case. He gave a list of all the bridges and mills on the Yellowbreeches from the mouth up, which is particularly convenient with reference to the question of the destruction of the bridges on that stream; and he effectually disposes of one of the questions raised about the bridges, — the only one that the county records directly touched. He also established the fact that John J. Zacharias, the complainants' witness, was the Zacharias who ran Hakes's grist mill, the first mill above Drawbaugh's shop on the Yellowbreeches, in 1876. This fact became

material in connection with the deposition of the witness Updegraff (for which see p. 249, *supra*).

No. 59. *Thomas M. Jones*, complts, ii, 1083. — He is a newspaper reporter, who wrote the article with the assistance at least, if not by the procurement, of defendants' counsel. This has been considered in connection with the deposition of the defendants' witness, Chellis (p. 167, *supra*).

The Draper-Kissinger Ram. — A certain number of other witnesses called by us related to the question of the hydraulic ram furnished by Drawbaugh and put upon the Draper farm at Marysville. This question will be considered by itself, and all these witnesses on both sides in connection with it. Those called on this subject during the complainants' proofs in reply are: —

No. 19. George W. Kissinger, i, 551.
" 20, John M. Kissinger, i, 575.
" 21. S. G. Geib, i, 579.
" 22. Geo. Frank Kissinger, i, 582.
" 25. John A. Foose, i, 611.
" 26. Samuel A. Foose, i, 611.
" 27. James C. Zimmerman, i, 622.
" 70. Thomas F. Davis, ii, 1192.
" 81. Jesse Wagner, ii, 1255.
" 87. Cyrus Kissinger, ii, 1463.
" 91. Mrs. G. W. Boyer, ii, 1541.
" 92. Mr. G. W. Boyer, ii, 1546.

Depositions of experts and depositions relating to Mr. Bell's history: —

Nos. 3, 99. *Alexander Graham Bell*, complts, i, 105; ii, 1273.
No. 4. *Thomas A. Watson*, complts, i, 200.
" 5. *Dr. Clarence J. Blake*, complts, i, 335.
" 6. *Edward L. Wilson*, complts, i, 350.
Nos. 1, 101. *Charles R. Cross*, complts, i, 20; ii, 1707.
No. 85. *F. L. Pope*, complts, ii, 1283.
" 100. *Alexander Melville Bell*, complts, ii, 1703.

Mr. Pope and Prof. Cross are experts, and Prof. Cross also had personal knowledge of Mr. Bell's invention before his patent came out. Mr. A. M. Bell is Mr. Alexander Graham Bell's father, and had early knowledge of the invention. Thomas A. Watson was the mechanic who assisted Mr. Bell in his early work, and so did Edward L. Wilson after the date of the patent. Dr. Clarence J. Blake was professor of otology in the Harvard Medical School, and the gentleman to whom Mr. Bell first disclosed his invention. Mr. Pope and Prof. Cross also testified about the Drawbaugh instruments, and Mr. Pope particularly about the tests of those instruments in New York, in which it was demonstrated that the earlier Drawbaugh exhibits were incapable of transmitting speech.

No. 2. *Edward L. Bradley*, complts, i, p. 52. — This witness proves that the defendants have used telephones, and threaten to continue to use them. His testimony, consisting of his affidavit which was used on the motion for preliminary injunction, together with the other proof upon which his Honor Judge Blatchford then found that there had been such use and threats, has been put into this case. The defendants agreed that the affidavit should stand in lieu of a deposition and waived cross-examination. There is of course no controversy upon the technical question of use of instruments.

No. 1. *Prof. Charles R. Cross*, complts, i, 20. — He is Thayer Professor of Physics at the Massachusetts Institute of Technology, has spent a number of years specially studying and investigating acoustics and electricity, and has acquired both theoretical and practical knowledge of the instruments employed in these two branches of science. He has frequently testified as expert in cases in the United States courts, and is well known as one of the most thorough, best informed and most conscientious and careful experts who are ever called upon to assist the Court.

His answer 6 (p. 22) states the nature of sound and particularly of articulate sound, including the theory of quality. It then (p. 24) explains the method of transmitting articulate sounds set forth in Mr. Bell's patent, No. 174,465, of March 7, 1876. It explains

in connection with that why a circuit-breaker, acting like Reis's transmitter, cannot transmit speech; it explains what is meant by "form" of sound vibration as understood by scientific men and illustrates this; explains the way in which the instruments of the Bell patent are thrown into motion, the character of the currents produced, and the nature of the results which come from them. The correctness of all this is admitted by the defendants' expert, Mr. Benjamin, except that he says that the instruments of the Bell patent will not to any practical extent accomplish the results stated, and that he considers that Mr. Bell did not intend to accomplish those results (v. p. 264, *supra*). Mr. Cross then (p. 34) shows that the alternative form of transmitter suggested by the Bell patent, whether such alternative form is fully suggested or described or not, is a telephone apparatus which employs in its operation and general method the substantial novelty introduced by the Bell patent, and infringes the claim. He then compares the defendants' apparatus (which consists of a battery transmitter with hard carbon electrodes and a magneto receiver) with the invention set forth and claimed in the patent, and shows that it infringes (pp. 36, 37). The defendants' hard carbon battery transmitter, like all other microphones, depends for its operation upon the law of nature that variations in intimacy of contact or amount of pressure between two electrodes in contact, from one to the other of which the current is passing, will vary the resistance of the circuit and consequently the strength of the current which passes. He shows that this fact was known and to some extent was acted upon, although not properly speaking utilized in electrical apparatus before our patent. He then (p. 40) refers to Mr. Bell's second patent, 186,787, of Jan. 30, 1877, states the invention there set forth and claimed, and shows how the defendants' instruments infringe that.

The first cross examinntion is not worth mentioning.

He was again called in reply (complts, ii, 1707). He begins with the following: —

"*Q.* 2. Have you read the deposition of Mr. Park Benjamin, who was called by the defendants as an expert, and whose deposition is on page 1179 of the defendants' record? If so, please state whether you find therein anything which leads you to modify the opinions you have already expressed in your deposition in this case.

"*A.* I have read the deposition referred to, but I do not find anything in it which leads me to modify the opinions which I expressed in my previous deposition in this case.

"*Q.* 3. Will you please state, as briefly as you can, the principal scientific facts which you find set forth, and correctly set forth in Mr. Bell's patent, No. 174,465, of March 7, 1876, with reference to the apparatus shown in Fig. 7, and its operation, and which bear upon the question whether the patent, so far as that apparatus is concerned, is a patent for an electrical speaking telephone?

"*A.* The speaking telephone is shown in Fig. 7 of the patent. In the body of the specification and in the claim the patentee describes the nature of the operation which will take place when a sound is uttered into the transmitter by the human voice. I know, as a matter of scientific knowledge, that when spoken to, this is the kind of operation which it theoretically will perform, and the only kind of operation which it theoretically can perform.

"The patentee then asserts the consequence of that operation with that apparatus to be that 'a similar sound to that uttered into the transmitter is then heard to proceed from the receiver.' This action is theoretically the necessary consequence of this operation of the apparatus. I know from actual trial that this operation would be so well performed by a set of instruments constructed according to the instructions of the patent, and without further invention, that the listener at the receiving end will recognize and understand words spoken at the transmitting end.

"That feature to which the most prominence is given in the specification is the similarity of form between the sound vibrations which actuate the instrument and the electrical undulations due to them. This is expressly mentioned in the following sentences of the specification: 'These undulations are similar in form to the air vibrations caused by the sound; that is, they are represented graphically by similar curves.'

"This is the only feature specifically mentioned in the claim, which reads as follows: 5. The method of and apparatus for transmitting vocal or other sounds telegraphically, as herein described, by causing electrical undulations similar in form to the vibrations of the air accompanying the said vocal or other sounds substantially as set forth.

"This feature secures the transmission of quality. It has no purpose, function or effect, except the transmission of quality, which includes articulate speech. This correspondence of form is the essential electrical novelty which distinguishes this apparatus from all others known to the community before it."

The instruments of the patent will transmit speech and in the way pointed out in the specification and claim.

The defendants alleged that instruments constructed in accordance

with the specification of Mr. Bell's patent could not transmit speech, and they attempted to fortify that statement by the fact that an instrument which Mr. Benjamin constructed would produce no sound at all (v. p. 272, *supra*). We met this allegation in two ways. In the first place we caused to be constructed one set of instruments 55 and

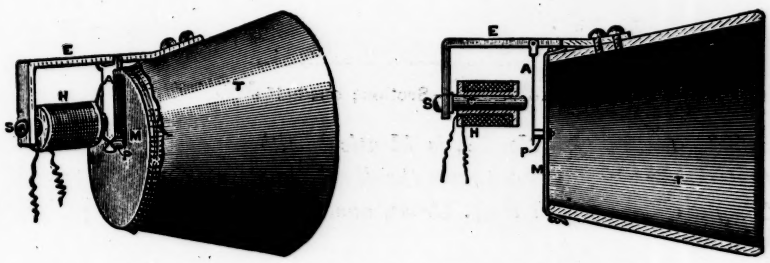


EXHIBIT 56. — Membrane Telephone Transmitter. Half size.

[*The receiver of this set* (55) *is identical with the transmitter, except that the cone tapers in from the diaphragm in the shape shown in Exhibit* 53. *For description, see Prof. Cross, ans.* 7, *complts, ii,* 1720.]

56, which are Chinese copies of Fig. 7 in the patent. This pair o instruments had no adjustment whatever. When the parts were screwed together they remained so without change.

Then we produced instruments 53 and 54, which were precisely

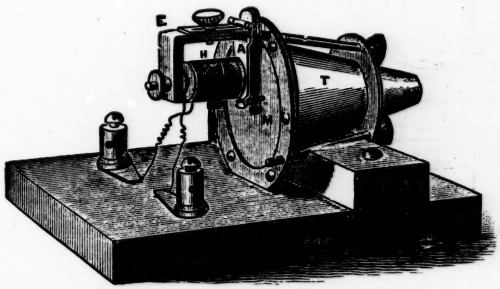


EXHIBIT 53. — Membrane Telephone Receiver on base. View; one half size.

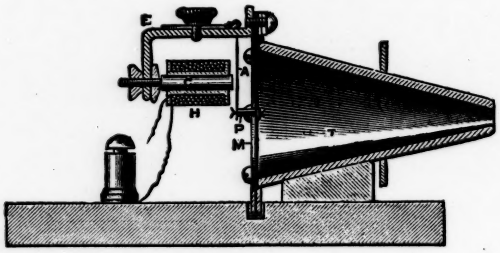
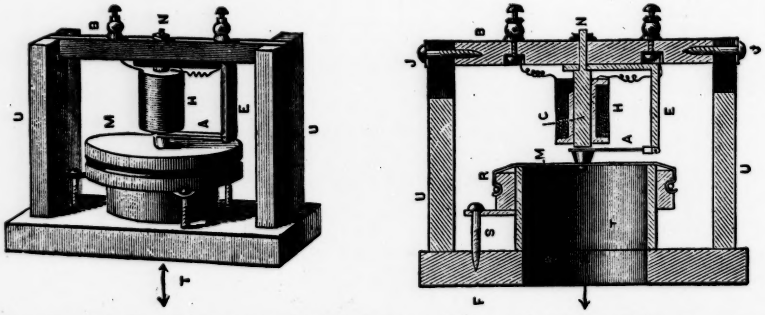


EXHIBIT 53. — Section; one half size.

[*The transmitter, No.* 54, *is identical with the foregoing, except that the cone T flares out from the diaphragm, as in No.* 56, supra. *They are described in Prof. Cross, ans.* 7, *complts, ii,* 1720.]

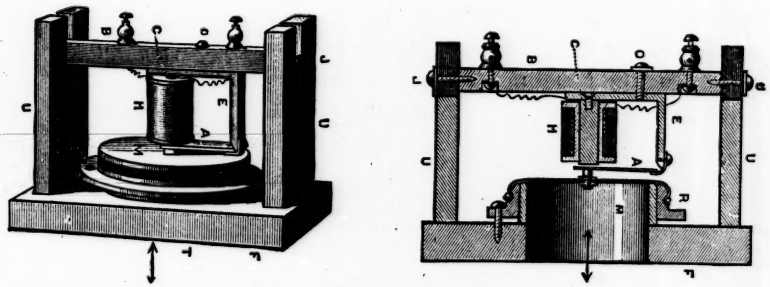
the same as 55 and 56, except that now the cones were arranged on a little baseboard with binding posts attached, and adjusting screws were provided to regulate the distance between the armature and the electro-magnet. These devices were such as the instrument maker would ordinarily put to any electrical instrument without special directions.

We also reconstructed the two pairs of magneto instruments like those made and used by Mr. Bell in the summer of 1875,



NOS. 49 AND 50. BELL'S FIRST TELEPHONE OF 1875 — "GALLOWS FRAME" — view and section. Scale of section, one fourth size.

[*It is both transmitter and receiver; speak or listen at the opening T.*]



NOS. 51 AND 52. BELL'S SECOND TELEPHONE OF 1875 — "GALLOWS FRAME" — view and section. Scale of section, one fourth size.

[*It is both transmitter and receiver; speak or listen at the opening T.*]

called here the "gallows-frame" instruments, or the "telephones of 1875." For this apparatus we had, and had put in evidence, the principal parts of the old instrument, to wit, the magnet, armatures, coil and straining rings and parts of the frame; these gave necessarily the size of all the other parts and the electrical dimensions of the electrical parts.

The defendants were invited to be present at the tests of these instruments, which were arranged between two rooms separated by a courtyard, at No. 40 State Street, Boston. Their counsel and expert attended; a shorthand writer took down what was spoken into the transmitter and what the listener heard at the receiver. Mr. Jacques, employed by the complainants, did the talking; Mr. Hill, respondents' counsel, was invited to do some of it, but did not desire to. The listening was done by Prof. Cross, complainants' expert, and by Mr. Benjamin, the defendants' expert.

With the two pairs of cone instruments, made as Chinese copies of the patent, ordinary phrases and newspaper paragraphs selected by the defendants were transmitted with scarcely the loss of a word, though some repetitions were required. The copies of the instruments of the summer of 1875 did not transmit so well, but still well enough to be of some practical value. During these experiments the instruments neither received nor required any adjustment,

except that three times, with different instruments, a portion of the framework slipped in handling and had to be pushed back into place.

The difficulty with all membrane instruments is that in a very short time the membrane of the transmitter becomes moist and flabl y from the warm breath of the speaker, and it is necessary frequently to change to get good results. During a considerable part of the transmission with these instruments, but not during all the time, the speaker spoke each phrase twice over without waiting to know whether it was heard the first time or not. Prof. Cross's deposition, pp. 1709 to 1720, gives the shorthand reports of what was spoken into the transmitter and what was heard at the receiver arranged in parallel columns; the results were as follows: —

"Receiving-room; instrument No. 53, *Prof. Cross*, listening, said that he heard: Hallo, — the sun is shining brightly outside. — I see a stone building. — There are many telegraph wires in view. — I got it the first time, but was not sure about the 'in view' till he repeated it. — The wires are fixed to glass insulators — There are also many chimney pots, — the 'also' I could not make out until the second time. — The spire of 95 Milk Street (I think he said) is half a mile away. 'The spire' I did not get till the second time, to be certain of it. — *Nobody listening. Mr. Benjamin now listens.* He said something of which I think I can understand the word 'directly.' *Prof. Cross listening.* The wind is directly west (I understood it the first time). [*From here to the end the words spoken into the transmitter were dictated by the respondents' counsel from a newspaper.*] *Mr. Benjamin listening.* '1882' I get; I don't understand anything else. — (*The circuit was accidentally broken during the first part of the sentence.*) — I got the words 'New York' and '1882'; what comes in between sounds as though he was naming a month; I can't say that month, the sound was loud but a good deal blurred. 'Henry Ward Beecher' — nothing else, it was repeated twice. — Something like — *something* 'sails to-day.' — 'Before Judge Harris,' repeated three times. — 'In the Supreme Court Circuit,' repeated three times. I got it the last time. — 'The action is for breach of,' something; I suppose 'breach of contract,' it sounds like that; I don't know whether it is or not. — *Prof. Cross listening.* The barometer is highest in Utah and lowest in the lake

region. — Something like 'last evening' — ask him to repeat. — At Marblehead last evening. — Mrs. Martha Chapman — as the result of a — as the result of an election wager — wheeled Mrs. Hannah Perry — in a wheelbarrow — from her residence on Front Street — through State Street to the square — around the town hall and return. — The vehicle was tastefully decorated — with Chinese lanterns. — Mrs. — Swett carried a large banner (Rhoda I thought was the word), — repeat; there was an accidental noise here, — with the picture of a fighting cock — and the inscription — 13,000 clean sweep.

"*Mr. Benjamin listening.* Repeat that, please: I have lost it. — No; no; I heard a noise, but it was utterly indistinguishable. — Argument is being made trades commission to-morrow (all the rest is lost) — on the insurance agent — (It is not so good as when I was here before.) — entertained for all their company, — or whether each company must buy separately. — The system is of great importance to Alabama — (something), of a — No; I get the form of the words, but I do not get the words. — *Prof. Cross listens.* Secretary Chandler was something this morning — (ask him to repeat the intermediate words.) — It sounds a little indistinct, as if the membrane was slightly moist. — Secretary Chandler was crowded with visitors this morning.

"No. 55 cone receiver, and 56 cone transmitter. *Prof. Cross listening.* This afternoon the delegates. — I thought I heard — ask him to repeat. — This afternoon the delegates of the New York something conference — assembled in the First Baptist Church, Brooklyn. — (This is much louder than before.) — There was a fair attendance of laymen. — The subject of discussion was — something — and religion. I thought he said 'race and religion' — on the American Continent. [In fact it was 'race and religion on the American Continent.'] — The conference will be continued to-morrow and Thursday — and a different topic will be considered each day. — Portsmouth, England, Nov. 14, 1882. — I was not expecting anything when he said that, so that 'Portsmouth' may be wrong. — The steamer 'Westphalia' has been docked here. — The captain of the 'Westphalia' says — intelligence [the word was 'colli-ion'], between his steamer and another steamer was caused — by the latter

improperly starboarding. — (Ask him to repeat the preceding sentence, as I was changing my hands just at that time.) — The collision. — He remained on the spot for two hours burning lights, — but the other steamer disappeared.

"Instrument 52 transmitter, No. 51 receiver. — 'Telephones of 1875,' 'gallows frame.' — There is some trouble with your transmitter: we hear nothing. The bar had slipped and was now replaced by Mr. Jacques. — *Prof. Cross listening.* Hallo! do you hear this? That is fair. — Ask him to repeat. — The despatch — something or other — from Paris — something were arrested — at Lyons have been committed for — something. — The preliminary — (repeat it, I think it is investigation) — shows the resistance of a something — was a partial rising at various points — ask him to repeat, Mr. Smith moved, — the offer paved the way, — there was a general outbreak. (The transmitter was here readjusted, the bar had slipped and was put back in place.) In the election to-day — (I got that the first time.) — for United States senator, — for the short term in the Senate, — Mr. Barlow received 29 votes, — and Mr. Hill 14. — (These were all heard the first time.) — In the House Mr. Barlow received 79 votes, — and Mr. Hill 91, — there was no election. *Mr. Benjamin listening at No.* 51. New York, Nov. 14, 1882. — There is great excitement here, — over the organization, — of the new board of aldermen. — The Republicans and Independents (tell him not to repeat unless I ask him to; I get it the first time.) — the — something — members, — have thirteen members, — and the Democrats one, — the latter on the meeting of the — the latter on the meeting of the old board, — (Repeat that: noise blotted it out.) — sounded like 'heated a candidate' [it was 'seated a candidate'] — (*Prof. Cross adjusted the instrument, stating that he did so because it had been thrown out of adjustment by putting it upon the table.*) — who claim to be elected.

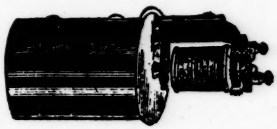
"No. 49 receiver, No. 50 transmitter: 'Telephones of 1875.' — 'gallows form.' *Prof. Cross listening at No.* 49. A scene is occasioned — it sounds like — quite a sensation [it was 'a scene which occasioned quite a sensation'] — occurred last night — in the Globe Theatre — during the performance. — Repeat — 'the Tennyson's something.' I thought I heard — of Tennyson's Mays — of Tenny-

son's new pastoral drama — (Mr. Benjamin, through tell-tale line, 'better repeat everything.') Once more — the promise of May — among those present, — was the Marquis of Kingsbury, — is an avowed free thinker. — He rose excitedly on his seat, — and loudly protested, — against Tennyson's representation, — is the principle of free speech — ask him to repeat, — as — being something — by one, — as the characters are performed."

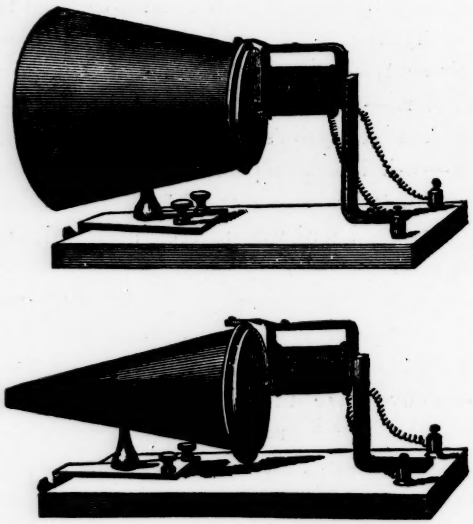
Everything that was heard was uttered as heard, except in a few instances which are apparent in the above.

The amount of battery is of some importance, though not essential. Mr. Cross testified that he had used, at different times, from one to eight cells of chromic acid Bunsen battery, finding, generally, that from three to five gave the best effects. The patent does not specify the number, but the drawing shows four cells. No indication, however, is necessary, for the rule which would ordinary be followed by an electrician would be to put on battery enough to saturate the cores with magnetism, or as near this as can be done without heating and burning the coils with the current (Pope, complts, ii, 1442, ans. 368; Cross, *ib.* 1722, ans 9).

Mr. Cross had also, in the Dowd case, tried a large number of different sets of magneto telephones made in strict accordance with the Bell patent. The account which he gave of these experiments in his deposition in the Dowd case, made immediately after they were tried, is put into this case and resworn to. It is found in complts, i, 223. He tried instruments 36 and 37, instruments 38 and 39, instruments 40 and 41, 42 and 43, and got practical speech through all of them. Perhaps the most interesting pair of these are 40 and 41, which are a couple of lovers' telegraphs or string telephones, so called, bought in the street (Watson, complts, i, 224), with magnets of corresponding size added to them in the workshop.



Exhibits 40 and 41. "Lover's Electric Telephones"; both alike.

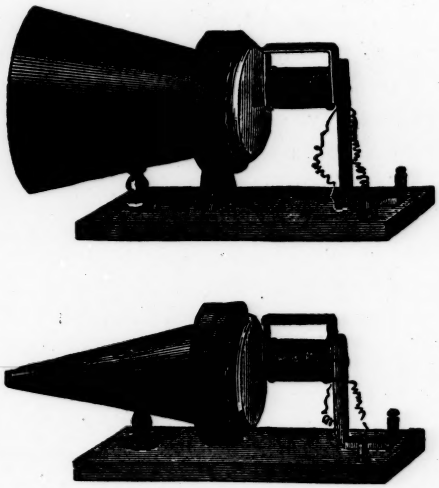


Telephones 36 and 37. Iron Cone Telephones. Diameter of Membrane three and three eighths inches; length of spool, two inches.

These were made as copies of a pair produced by Mr. E. S. Renwick, the hostile expert in the Dowd suit, and with which he said that he could not talk. He declared that they exactly conformed to the patent. He added adjusting devices because, he said, that the state of the art called for them. (See Pope, ans. 408, 424, complts, ii, 1452, 1457.)

Exhibits 38 and 39, "Baby Membrane Telephones."

They are Chinese copies of the drawing Fig. 7 of the patent, and of the same size as the drawing originally filed by Mr. Bell, a *facsimile* of which is in complts, iv, exhibits, p. . The membranes are a little less than one inch in diameter.



Exhibits 42 and 43. Adjustable Membrane Telephones.

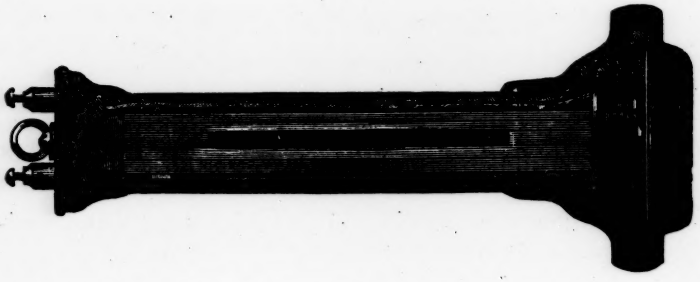
These are the same as Nos. 36 and 37, except that one of the magnet adjustments is omitted and straining rings are provided for the membrane. This is an old device, used in acoustic instruments; *e. g.*, Scott's phonautograph.

Mr. Cross, p. 1722, refers to the brass cone instruments of Mr. Benjamin, explaining why they would not produce a sound, and showed that it was because the armatures were too far from the magnets for the one to have any effect on the other, and that no constructor of respectable skill, with the knowledge that existed at the time of the Bell patent, could be guilty of such a piece of folly, to use the mildest phrase for it. The best modern magneto telephones cease to transmit when the armature is one eighth of an inch from the magnet (ans. 23, p. 1725). The thickness of a sheet of paper at the nearest position is the rule with telegraph instruments. He then produced a pair of instruments, which are the exact copies of Mr. Benjamin's brass cone telephones, except that the parts were made of such size that the armature and magnet were put together in their proper relations, and he testified that these talked perfectly

well. Mr. Benjamin has not been called to reply to this, nor to explain his conduct (see p. 273, *supra*).

Mr. Cross was present during the first day of the tests in New York and he confirmed Mr. Pope's testimony (p. 540, *infra*) so far as it related to that day, and stated that in his opinion, even with the same precautions and under the same favorable circumstances, a person of untrained faculties would not be able to understand anything.

He put in evidence one Bell commercial magneto telephone, such as is commonly used as receiver ("butter-stamp" form), and also the transmitter in ordinary use, known as the Blake transmitter.



"Butter-Stamp Hand Telephone."

He had known Mr. Alexander Graham Bell, the inventor, from the first part of 1874, and the essential part of the invention was disclosed to Prof. Cross at an early time. He testifies (complts, ii, 1727) :—

"*Q.* 36. Did he or not, during that winter, speak to you about the electrical transmission of speech; and, if so, did he state to you any conception he had as to how it could be accomplished, and did or did not his mind appear to you to be much occupied on that subject?

"*A.* We conversed together at that time regarding the transmission of speech. I understood that he proposed to do this by means of electrical undulations, and that these undulations were to be produced by the vibration of a reed in front of a magnet. At

some time during this winter he communicated to me the idea of vibrating the reed by means of a membrane.

"The subject of the transmission of speech was one which evidently occupied his thoughts, and to accomplish which he was striving to develop an efficient method.

"*Q.* 37. Did you form any opinion at that time as to the theoretical adequacy and perfection of the undulatory current method which he then disclosed to you?

"*A.* As soon as the method itself was described, I saw that it was theoretically perfect, and, therefore, in theory, adequate to the transmission of speech.

"*Q.* 38. Did you form any opinion at the time, and if so, what, as to the practicability of accomplishing it according to that method by employing an armature and membrane vibrated by the voice to generate the undulatory current relied upon?

"*A.* I supposed at that time that the effect produced by the vibration of an armature would be entirely too small to accomplish the desired end.

"*Q.* 39. Did he or did he not, during that winter, speak to you of the employment, for purposes of multiple telegraphy, of currents produced by the sonorous vibrations of a reed armature in front of an electro-magnet?

"*A.* He did.

"*Q.* 40. Did you form any opinion at that time as to the practicability of employing currents so produced for the purpose of harmonic multiple telegraphy, and if so, what was it?

"*A.* This plan seemed to me to involve far less difficulty than the transmission of speech. I did not consider very fully what difficulties might be found with it in practice.

"*Q.* 41. Did you know, during that winter and spring, or did you hear, during that winter and spring, of anything in his condition and surroundings which was calculated to prevent him from devoting his time and attention to experimental work concerning the electrical transmission of speech; and if so, what was it?

"*A.* I understood that his means were very limited, so that he was obliged to confine himself very closely to his classes, which necessarily occupied a great part of his time. I also understood that he was under obligation to certain persons to devote his attention and experimentation exclusively to multiple telegraphy.

"*Q.* 42. Please state whether the electrical difficulties in the use of a harmonic multiple telegraph apparatus using induced undulatory currents, and those involved in the use of an apparatus for the transmission of speech, like that shown in Fig. 7 of the patent, have any similarity of character, and involve similar or altogether diverse lines of study and experiment to overcome them?

"*A.* The electrical difficulties which would be encountered in the operation of the two instruments are similar in character, though different in degree. Each advance in perfecting the transmission of signals by the undulatory current, so far as the electrical difficulties are concerned, would be a new step toward the practical solution of the electrical problems involved in the transmission of articulate speech."

His cross-examination apparently was directed in part to show that it was not necessary that the electrical undulations should be *exactly* the same as the air vibrations, and the whole of his testimony upon that is summed up (p. 1731): —

"*X Q.* 53. Then, from the qualification which you have added in your last answer, I should judge it to be unnecessary for the transmission and reproduction of articulate speech by electricity that the electrical undulations should be exactly similar in form to the air vibrations caused by the sound, or that they should be represented by exactly similar curves, but that on the contrary it would be sufficient if they were approximately similar in form or were represented graphically by approximately similar curves; am I correct, in your judgment?

"*A.* In an absolutely perfect apparatus there would be exact similarity between the acoustic and electrical undulations, and they would be represented by exactly similar curves."

He was then cross-examined as to whether a stretched membrane or the metal diaphragm of a telephone had each a normal rate of its own, unfitting them for articulation, to which he replied that while each did have a certain normal rate when executing "free" vibrations, it still would take up and perform under the influence of external forces one rate or kind of "forced" vibration about as well as another.

No. 3 and No. 99. *Alexander Graham Bell*, complts, i, 105; ii, 1273. — Age, thirty-six. Mr. Bell tells the story of the invention of the electric speaking telephone. Briefly it is: —

He sought to invent it in 1874.

He disclosed his ideas to others in 1874 and in 1875.

He experimented in 1875.

He drew a specification in 1875.

He took a patent in 1876.

He offered the invention as a thing novel and useful in 1876.

He became famous for it in 1876.

He has put more than 300,000 into practical use.

No one questioned his title until the practical and commercial success of the invention was assured; the claimant did not question it until 1880.

This is a part of the history of our times. It could not be true of any man who had not invented the telephone; it was sure to be true of the first inventor of it.

No attempt will be made to abridge his deposition; some of the details are stated in the body of the brief.

No. 4. *Thomas A. Watson*, complts, i, 200.— Mr. Watson was the workman who aided Mr. Bell in 1875, being then twenty-one years old. He confirms Mr. Bell's account of such earlier experiments as he assisted him in. He made some of the earlier instruments. And he also tried instruments made according to the patent, in connection with Prof. Cross and others. In that part of his deposition which extends from p. 231 to 291 (complts, vol. i), he stated the progress made by Mr. Bell, the introduction of his instruments into commercial use, the improvements which from time to time were made in them, inserted in the deposition copies of a large number of publications showing the manner in which the invention was received by the community, and how everybody recognized it as a new thing and Mr. Bell as the inventor of it. The principal part of his deposition is copied from the depositions which he gave in 1879 and 1880 in other cases. It was put in here by consent (complts, i, 105); on p. 307 he reswore to it and gave some further testimony, particularly about the use of a liquid transmitter, on March 10, 1876, with a statement of what was transmitted by it on one particular occasion. The cross-examination was directed to showing that in the summer of 1875 there were very few words or none at all actually understood by him when listening at the receiver; but he also testified that Mr. Bell was satisfied from experiments they made that he had found out how to make a speaking telephone and proceeded to prepare his specification and take out his patent for it.

He testified that an adjusting screw is not needed in a magneto-telephone and is not used in practice (complts, i, 330).

On the cross-examination he was asked to more fully describe and make drawings of some of the instruments which he had constructed in 1876 for Mr. Bell, and he did so, including two liquid transmitters one of which was exhibited at the Centennial.

No. 5. *Dr. Clarence J. Blake*, complts, i, 335. — Dr. Blake is a well-known physician, lecturer on otology in Harvard University, and aural surgeon to the Massachusetts Eye and Ear Infirmary. He has devoted his life not only to aural surgery, but to a thorough scientific study of those phenomena of acoustics with which the hearing of articulate and other sounds is particularly connected. He made Mr. Bell's acquaintance in 1874, and Mr. Bell in October of that year described to him his plans for the transmission of speech by electricity. Dr. Blake's deposition in this respect is as follows (complts, i, 335): —

"*Q.* 3. Did Mr. Bell at that time describe to you any apparatus for the transmission of sound by electricity? If so, please repeat the description he gave you of the apparatus and the mode in which it was to operate, and the character of the sounds which he intended to transmit by it.

"*A.* He did describe an apparatus consisting of a metal reed set in vibration in front of a magnet as part of an organ pipe. Also an apparatus consisting of a metal reed set in vibration in front of a magnet and coil, and also an apparatus consisting of a metal reed set in vibration between two magnets and coils, and also an apparatus consisting of a series of metal reeds which might be set in vibration in response to a musical instrument or the human voice. The idea of this latter apparatus was that the metal reeds of different lengths would respond to the different tones of a musical instrument or of the human voice.

"*Q.* 4. Did he describe to you any electrical apparatus in which a membrane was to be used? If so, please tell me what that apparatus was.

"*A.* Yes; an apparatus in which one metal reed was substituted for the several metal reeds of the harp last mentioned, this one reed being actuated by a membrane to which it was to be attached, which membrane was to be set in vibration by the tone of the musical instrument or by the human voice.

"*Q.* 5. Did you have any discussion with him as to the character of the membrane, or mode of arrangement of the membrane and

armature; and if so, state what was said on that subject at that interview by both of you?

"*A.* Yes; the idea of Prof. Bell, as communicated to me, was this: That if the simple pendulous vibration of a metal reed could be communicated to a second reed electrically connected with the first, more complicated vibrations communicated to the metal reed from a musical instrument or the human voice through the medium of the air could also be electrically transmitted. To accomplish this purpose it was, according to his idea, advisable to attach the metal reed to a membrane, which would reproduce the aerial vibrations produced by a musical instrument or the human voice, substituting a metal reed in fact for the stylus of the improved Morey phonautograph, and of the *membrani tympani* phonautograph with which he had been experimenting. I then suggested, as an experiment, *since his principal object was the electrical transmission of articulate speech*, that the metal reeds should be brought in contact with the human *membrana tympani*, suitably prepared and mounted for the purpose."

He also produced the sketch referred to. It is not and was not intended as a drawing of a speaking telephone; it was to illustrate particular points in the explanation.

In his cross-examination was found the following (complts, i, 341):—

"X *Q.* 31. Did you at the time clearly understand Mr. Bell's explanations of the ideas which he professed to have conceived in regard to the transmission of sound by electricity, and the means which he proposed to use to carry them into effect?

"*A.* I did.

"X *Q.* 32. Do you now recollect clearly and fully what those ideas were, and what the means were as he then described them to you?

"*A.* Yes, as regards the main points. It was in part a desultory conversation, in which other points relating to acoustics were discussed.

"X *Q.* 33. What was the date of that conversation?

"*A.* October, 1874."

"X *Q.* 43. That conversation and the sketches which were made by him in the course of the interview related to the harmonic telegraph, did they not?

"*A.* Less to that than to his absorbing idea of the transmission of human speech; for, as I remember that interview, the transmission of single musical tones was considered only incidentally.

"X *Q.* 44. So far as you have any knowledge, Mr. Bell had not at that time discovered how to transmit articulate speech, had he?

"*A.* Yes.

"*X Q.* 45. What knowledge have you that leads you to that conclusion; and when and how was that knowledge derived?

"*A.* Mr. Bell's description of a means which he proposed for that purpose. I refer to his description at that time.

"*X Q.* 46. Now, as you say you remember clearly and fully what Mr. Bell described at that time, will you please give us the description which Mr. Bell then gave you of his discovery of the transmission of speech by electricity?

"*A.* The plan proposed by Mr. Bell was the attachment of a metal reed to a membrane vibrating in response to the human voice, the metal reed acting as armature to a magnet connected with another magnet at the end of a line wire, armed with a corresponding reed and membrane, the idea being that if the simple pendulous vibrations of a metal reed at one end of a line wire could be reproduced in a metal reed at the other end of the line wire, the more complicated vibrations evoked by the human voice could also be so reproduced.

"*X Q.* 47. If I understand you, Mr. Bell had not tried the experiment at that time, but only proposed it as a possible solution of the question; am I correct?

"*A.* So I understood him.

"*X Q.* 67. Then, if I understand you correctly, your idea was that he had struck upon the correct principle to be applied, and that the further development would consist in discovery or invention of the proper means for carrying that principle into practice; am I correct?

"*A.* Not precisely; rather that, having determined one mechanical means of effecting the purpose of transmitting speech electrically, further experiment in the direction of an improvement of this mechanical means would be required to perfect an apparatus for this purpose.

"*X Q.* 68. Do I understand you that you believed that the mechanical means which he described and illustrated in those sketches at that interview would in the form there shown be capable of transmitting articulate speech electrically?

"*A.* Yes, as concerns the attachment of a metal reed to a membrane.

"*X Q.* 69. He did not in his sketches illustrate the attachment of a metal reed to a membrane, did he?

"*A.* I think not, but described its attachment in the place of the stylus of the phonautograph."

"*X Q.* 79. At that interview, who first suggested the employment of a membrane; you or Prof. Bell?

"*A.* Prof. Bell told me that, as the results of his experiments with a membrane phonautograph, he had conceived the idea of a way in which speech could be electrically transmitted. I replied, 'I think that I know how you would accomplish it, by making a membrane

actuate a metal stylus.' Mr. Bell replied, 'That is precisely my idea. If a membrane like the human *membrana tympani* moves a weight such as that of the ossicles, a membrane having a metal reed attached to it should move that reed in response to the human voice.' His further idea, as communicated to me, was that by means of this arrangement undulations should be produced in an electric current corresponding to the undulations of the air produced by the human voice.

"*X Q.* 80. Then you actually described the instrument to him before he described it to you, did you?

"*A.* I did not.

"*X Q.* 81. I understood you to say that before he told you how he proposed to accomplish the result, you anticipated him by suggesting the employment of the membrane and attached stylus, and that he then, in response to that suggestion, gave you to understand that that was the idea which he had had in his mind, but which, as I understand you, he had not until then described to you. If I am incorrect in this understanding, will you please correct me?

"*A.* My remark to Mr. Bell concerning the attachment of the membrane and metal stylus was in the form of a question rather than a suggestion.

"*X Q.* 82. What I want to know is this: Whether you asked that question before Mr. Bell described to you the plan of attaching the metal stylus to a membrane for the purpose of transmitting speech electrically, or whether you did not ask the question till after he had described such plan; did your question come before or after his description of that plan?

"*A.* Before."

"*X Q.* 85. That answer does not fully meet the question which I asked, and which, perhaps, I can simplify by putting it in this form: Did he ask your opinion as to whether the human voice could or could not vibrate a membrane with a stylus or armature attached?

"*A.* Yes.

"*X Q.* 86. What answer did you give to his question?

"*A.* That it could, if proportioned properly to the membrane, but that I doubted if a plane membrane would reproduce with sufficient accuracy the sound waves resulting from the human voice."

"*X Q.* 89. At that interview in October, 1874, when you suggested the use of the human *membrana tympani* and expressed a doubt as to a plane membrane being sufficient for the purpose, did you and Mr. Bell discuss pretty thoroughly your reasons for preferring the *membrana tympani?*

"*A.* Yes.

"*X. Q.* 90. What were those reasons as you then stated them to him?

"*A.* That a curved membrane, that is to say, a membrane the

centre of which is depressed below the level of its periphery, and the surface of which therefore presents a curve from the centre to the periphery, responds in sympathetic vibration to a much wider range of musical tones than a plane membrane, and that the human *membrana tympani*, being especially adapted for such vibrations, would best answer the purposes of the experiment.

"*X. Q.* 91. Did you discuss with Prof. Bell the reasons why the curved membrane approximating the form of the ear would produce the expected improved result?

"*A.* Yes; but very briefly.

"*X Q.* 92. What reasons were suggested for it in that discussion?

"*A.* That, responding more readily in sympathetic vibrations to a wider range of tones, it would respond more readily to the human voice and reproduce more accurately the complicated sound waves therefrom resulting."

No. 6. *Edward L. Wilson*, complts, i, 350.— Mr. Wilson was a young man who in the summer of 1876 assisted Mr. Bell in the use of his Centennial instruments, and subsequently made some experimental apparatus. He states what he did and saw.

No. 85. *Frank L. Pope*, complts, ii, 1283.— Mr. Pope is an electrical expert of long experience, both theoretical and practical. He is not only an educated electrican, but during his whole life has been concerned with telegraphy in positions of responsibility, and has had particular experience in practically testing electrical inventions and contrivances, putting them into use; and has made a number of electrical inventions of his own. He is a well-known writer upon telegraphic matters.

In a suit brought upon the Bell patent, in 1878, against Peter A. Dowd, an agent of the Western Union Telegraph Company, Mr. Pope, then a practical expert in the employ of the Western Union Company, testified as expert on behalf of the defendants. To prepare himself, not merely for that deposition, but more especially to advise the Western Union Telegraph Company upon all matters connected with telephones, he made a careful and thorough study of the subject of the transmission of sound by electricity, spending many months upon that particular matter. From his direct examination, and still more from his cross-examination, we became satis-

fied that he believed the electric speaking telephone to be an entire novelty with Mr. Bell; that he believed the invention was well set forth and properly claimed in Mr. Bell's speaking telephone patent, and that, in his opinion, neither Mr. Gray nor any other person could impugn that patent; but that he hoped, on behalf of the Western Union Telegraph Company, owners of Mr. Gray's inventions, that some of those inventions might be so claimed in patents as to cover contrivances which were used in making and operating speaking telephones. Being subsequently further confirmed that such were his opinions, we sought the aid of his skill and experience as an expert in this case. The details of his deposition are as follows: —

First, he states the nature of Mr. Bell's invention, and the manner in which it is described and claimed in his patent (complts, ii, p. 1287): —

"*Q.* 3. Please state what inventions you find set forth in Mr. Bell's patent 174,465, of March 7, 1876, referred to in the bill.

"[*Objected to by Mr. Hill, as incompetent and not rebutting.*]

"*A.* The patent referred to purports to be an improvement in telegraphy, but it has to do or concern itself with sonorous vibrations and their production at a distant station by means of electricity.

"The drawings to which the description in the specification refers show two different kinds of apparatus, of which a careful reading of the specification shows Fig. 5 and Fig. 7 to be what may be considered as typical forms. These two forms differ, not only in their mechanical construction, but in the purpose for which they are respectively designed. The particular form given to each, in order to better adapt it to its intended purpose, renders it partially or entirely unfit to properly serve the purpose of the other. There is, however, one feature common to both these types of apparatus, which is, that when the moving portion of the transmitter performs mechanical vibrations — whatever may be the form or character of these vibrations — a corresponding effect is produced in the electrical portion of the apparatus, that is to say, what the patentee terms electrical undulations are produced; and these undulations, in their several characteristics of frequency of recurrence, of relative amplitude and of form, faithfully copy the corresponding characteristics in the mechanical movement of the transmitter.

"The moving part shown in the class of transmitters of which Fig. 5 is a type, is designed more especially for multiple telegraphy, and the armature of the transmitter and receiver are adapted to vibrate at a certain determinate pitch, which is the same for each, and for

the purposes of multiple telegraphy it is only necessary to transmit pitch. The quality of *timbre* of the sound is of no importance in this application. For example, two transmitting instruments having precisely the same pitch, but differing widely in form or quality of vibration, might either of them be used to produce signals upon a receiver of the same pitch; and so also, two receiving instruments having the same pitch, but differing in their form of vibration, might be used interchangeably in connection with a transmitter of corresponding pitch. And in such case the results would be, in a practical and commercial sense, the same.

"In the case of apparatus of which Fig. 7 is a type, the moving portion of the transmitter, when thrown into vibration, acts precisely like that of Fig. 5, in that it produces in the electrical portion of the apparatus electrical undulations, which, in their several characteristics of rate, relative amplitude and form, are similar to those performed by the moving portion of the transmitter.

"The essential difference between the two types of apparatus is this: The moving portion of the transmitter and of the receiver in the type represented by Fig. 7 has no inherent tendency to perform any particular rate or character of vibration, but is so constructed as to take up and execute vibrations of any character whatever which any exterior vibratory force may seek to impress upon it. This, as I have said, is true of the moving parts of both the transmitter and the receiver. Thus, if in the apparatus, Fig. 7, two transmitters, alike in pitch or rate, but differing in form of vibration, were applied successively in connection with the same receiver, the results would not, as in the case of Fig. 5, be the same; and not only that, but if they were the same, they would be of no practical or commercial value for the purposes for which this apparatus is designed.

"The results arising from this mechanical modification of the apparatus are of the highest importance. The moving portion of the transmitter will freely take up vibrations of any degree of rapidity, of any form or other characteristics whatever, no matter how complex, which have been imparted to the surrounding atmosphere, as by the production of sound, and will produce in the electrical portion of the apparatus undulations which are precisely similar to those of the air particles from which they were originally derived; and these undulations in turn will act upon the movable portion of the receiver; and inasmuch as this is also capable of responding freely to any external force impressed upon it, the electrical undulations will act upon it and compel it so to do. By reason of the large surface which may, by this means, be thrown into vibration in the receiving instrument, its vibrations are imparted to the adjacent air, from which it results that a sound is produced in the neighborhood of the receiving instrument, which is similar to that by means of which motion was originally imparted to the transmitter. In this manner the vibrations into which the air is thrown by the voice of the

speaker in the neighborhood of the transmitting instrument are imparted to the air in the vicinity of the receiving instrument, retaining all the characteristics of rate, amplitude and quality, which are peculiar to articulate speech; or, in the words of the patent, 'a similar sound to that uttered into A (the transmitter) is then heard to proceed from L' (the receiver).

"The essential features which characterize the mode of operation of the apparatus last described are summed up concisely in the fifth claim of the patent, and consist, as the claim states, in causing electrical undulations similar in form to the vibrations of the air accompanying vocal or other sounds.

"I do not understand that the method set forth in the fifth claim is confined to the use of transmitters like those shown in the drawings accompanying the patent, and in which the moving parts of the transmitter produce the electrical undulations by magneto-induction; for it evidently includes within its scope other devices whereby electrical undulations are produced, corresponding to the movements of the transmitter under the influence of sonorous vibrations, some of which are mentioned in the specification as equivalents.

"The fifth claim of the patent, in stating the nature of the operation by which sounds are transmitted, sets forth everything required to be made known in addition to the common stock of knowledge in existence at the date of the patent, which was essential to the successful transmission of articulate speech by means of electricity; and in fact, so far as is known at this day, articulate speech cannot be successfully transmitted, if any portion of the method set forth in the fifth claim as the invention of the patentee be omitted. I have not mentioned all the advantages which flow, and which are stated by the patentee to flow, from the employment in telegraphy of undulatory currents corresponding in their character to that of the vibratory movements of the transmitter or transmitters, but have only referred to such as seemed to me to have a bearing upon the present case. I will mention, however, one characteristic which is alike common to both kinds of apparatus of which Figs. 5 and 7 of the patent are the respective types. Every apparatus and method for the electrical transmission of sound which was known prior to the date of the patent, so far as my knowledge extends, was designed to operate by the alternate closing and breaking of an electric circuit by means of the transmitter. Such a mode of operation would be absolutely fatal to the production of the results designed to be attained by the apparatus shown in Fig. 7, and, moreover, would not possess any of the advantages which are attained, as the patentee sets forth in his specification as arising from the employment of undulatory instead of intermittent currents. The apparatus shown in Fig. 7 of the drawings and described in the specification in connection with said figure, is an articulating telephone. It contains all the elements necessary for its intended purpose, and these are com-

bined together in such a manner that a practically operative speaking telephone can be constructed in accordance therewith. Moreover, it seems to me perfectly evident from a careful reading of the specification that this was the chief purpose for which the patentee designed the apparatus shown in Fig. 7. He says, after describing the class of instruments of which Fig. 5 is the type, 'I desire here to remark that there are many other uses to which these instruments may be put, such as the simultaneous transmission of musical notes, differing in loudness as well as in pitch, and the telegraphic transmission of noises or sounds of any kind.'

"The phrase 'transmission of noises or sounds of any kind' would, of necessity, seem to include articulate speech; but after making this general statement the patentee goes on to describe the particular modification of his apparatus shown in Fig. 7, whereby, as he says, 'motion can be imparted to the armature by the human voice,' or by other specified means. Finally, he describes the manner in which the apparatus is operated 'when a sound is uttered in the cone' (of the transmitter), etc., and after tracing the continuous chain of operations through the apparatus from the transmitter to the receiver, concludes with the statement: 'A similar sound to that uttered into A is then heard to proceed from L.'

"When the patentee speaks of the utterance of sounds by the human voice, the plain and obvious signification of the term is, that the utterances are another name for articulate spoken words; and it seems clear that this is precisely what the patentee meant, especially in view of his previous remark, to the effect that the apparatus is adapted to accomplish the telegraphic transmission of noises or sounds of any kind.

"*Q.* 4. Will you state whether one skilled in the manufacture of acoustic and electrical apparatus at the date of Mr. Bell's said patent, and possessed of the common stock of knowledge and technical skill belonging to those arts at the date of said patent, could, by the use of that knowledge and skill, and by following the information furnished him by the Bell patent, construct an apparatus which would perform the operations attributed to Fig. 7, and thereby transmit articulate speech?

"*A.* I think there is no doubt whatever that a person so skilled could have constructed an operative apparatus at the date of the patent, and which would produce the results which the patent states may be produced thereby, namely, the transmission of noises or sounds of any kind, including articulate speech."

During the controversy with the Western Union Company, and when it was for the interest of his clients to prove that an apparatus constructed according to the patent would not talk, that being one

of the defences they set up, he tested the matter himself, as follows (p. 1292) : —

"I directed a skilled workman in the manufactory of the Western Union Telegraph Company, in New York, to construct an apparatus from the drawings of the patent, giving him no specific directions except to make the apparatus work if he possibly could."

As soon as the instruments were made, he tried them, and found he could carry on conversation with them. Those instruments have not been preserved.

A. 13 and 14, p. 1296. He testifies that he tried the set of telephones 53 and 54, and the set 55 and 56 (shown p. 305, *supra*) ; that they are constructed in conformity with the description and drawing of Fig. 7 in Mr. Bell's patent, and that he has carried on a conversation with them.

Mr. Benjamin, as stated on p. 273, *supra*, constructed some brass cone instruments, which he alleged conformed to the patent, and which he said gave no sound. Mr. Pope (ans. 15, p. 1297) states that he should not expect to get any sound from those instruments, for the reason that the distance between the armatures and the poles of the electro-magnet was so great that neither could influence the other; and he stated what the universal rule and practice among constructors was as to the distance between armature and magnet; and that a workman possessed of the ordinary knowledge at the date of the Bell patent would need no further instructions than those given in the patent; that the patent drawing, as is common in electrical drawings, and as required by the practice of the Patent Office, exhibits the armatures at such distance from the magnet as is necessary to prevent the lines running into each other in the photo-lithograph; and that the well-known meaning of the word "armature" itself, as expressly defined by the defendants, implies that it is to be placed as close as possible to the electro-magnet; that the ordinary rule with telegraph instruments is to make the distance equal to the thickness of a sheet of paper, when they are nearest each other in their ordinary motions. He then criticizes the brass cone instruments.

On p. 1293 he says: —

"*Q.* 7. Was there anything known to electricians, prior to the date of Mr. Bell's patent of March 7, 1876, which would have justified the assumption that the force of sound waves would have been sufficient, or could have been employed to generate electric currents, which in turn could have been capable of causing any mechanical motion and thereby producing any sensible or useful result?

"*A.* In my opinion there was not. Very little was known at that date as to the actual mechanical effects which were capable of being produced by the sonorous atmospheric vibrations accompanying the production of ordinary sounds, such, for example, as those produced by the human voice. Perhaps the only application of this force to produce an appreciable result, which was at all well known at that date, was the phonautograph, so called, in which the vibrations of a membrane, produced by such sound waves, were made to move a bristle over a surface of smoked glass through a very small range of vibration. The power required to effect this was inconsiderable in amount. On the other hand, all the different kinds of apparatus then known for the transmission of signals by magneto-electricity, such, for example, as the dial telegraphs of Wheatstone, of Siemens, and of Highton; the needle telegraph of Highton and the magnetic Morse key of Siemens and Halske, required the exercise of a considerable degree of mechanical force upon the armature of the transmitter, in order to communicate a slight movement to the delicate armature or needle of the receiver; the mechanical effect produced at the receiver in each of these instruments being probably not more than one per cent of that exerted upon the transmitter. In view of the state of knowledge at the date of the patent, it could hardly have been supposed that a magneto-generator, moved by a force no greater than that which served to move the bristles of the phonautograph, would under any circumstances be able to generate an electric current which would produce upon a receiving instrument any effect whatever which would be perceptible to the senses."

Mr. Pope adds that when he first heard of Mr. Bell's magneto speaking telephone, he perceived that its operation would be theoretically perfect, but believed, until he saw it tried, that the effects would be too slight to be of any practical value. This is a matter of some importance. It has been suggested that the moment Mr. Bell reached the conception, he would naturally have made the instruments and tried them. But the fact is, that when he reached the conception he believed, and Mr. Pope shows that every electrician would have believed, that the effects produced by such a contrivance would be too feeble to be of any practical value; Mr. Bell

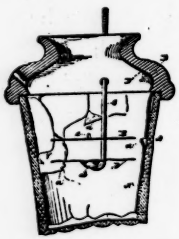
set himself to work to devise an alternative subordinate portion of his proposed apparatus (the transmitting portion) which should play the same part in performing the same operation, but, he hoped, with greater efficiency. Before he accomplished this he found, to the surprise of himself and every one, that the proposed magneto transmitter was sufficient.

Mr. Benjamin, the defendants' expert, stated, in substance, that all the Drawbaugh instruments which were in working condition, and the alleged reproductions of such of them as had gone to pieces, were good, full-sized, practical, working, speaking telephone instruments. We did not believe that, and, by way of cross-examination, required him to repeat the experiments. These were performed in New York, at a place selected by the defendants. The tests were entirely carried on by them; Mr. Hill, the defendants' counsel, whose voice is remarkable, speaking into the transmitter, and Mr. Benjamin, their expert, listening, except occasionally for a few minutes, at the receiver. All that the complainants insisted upon was that the tests should be observed and noted, and that a shorthand writer should take down what was spoken into the transmitter at one end and what Mr. Benjamin thought he heard at the other. The result of these tests, which occupied three days, proved that the instruments, F, B, C, I, A, the remains of which were produced by Drawbaugh, and which were testified to by his witnesses, and any combination made out of them, *could not by any possibility have transmitted intelligible speech*, as the witnesses testified; that is, that no instruments alleged to have been made before the date of the Bell patent could have done that, except the magneto instruments D and E Mr. Pope attended all these tests, took notes himself; notes in shorthand and long hand were taken by both parties, and were all printed in complainants' books of exhibits (pp. 481–774). Mr. Pope collated all these, and put together in parallel columns, under the head of each set of instruments, what was spoken into the transmitter at one end, and what the listener thought he heard at the other. He prefaces his statement of this by some statements as to the character of the various forms of instruments produced by the defendants.

Drawbaugh and one or two of his witnesses alleged that the tum-

bler transmitter F was originally whole, and had water at the bottom. Mr. Pope explained that the presence of water in such an instrument as that, on one side of the membrane diaphragm, and the warm breath of the speaker applied to the other side of it, enclosed in a cap or mouthpiece, would quickly destroy the elasticity of the membrane, and make it flabby.

He stated (ans. 31, p. 1302) that the remains of instrument F show that it was constructed differently in several respects from the instrument falsely styled "F reproduced"; that these differences are differences all greatly in favor of the instrument "F reproduced"; that a great difficulty with "F reproduced," in the New York tests, was that it was almost impossible to get it into proper adjustment, and when a suitable adjustment was hit, it was almost impossible for it to continue in adjustment long enough to transmit two consecutive words; that the differences between the two instruments are such that in these respects and some others, "F reproduced" was a much better instrument, and would give much better results, than F ever could. Most of these differences are referred



Section of "F," one fourth size.

Section of "F reproduced," one fourth size.

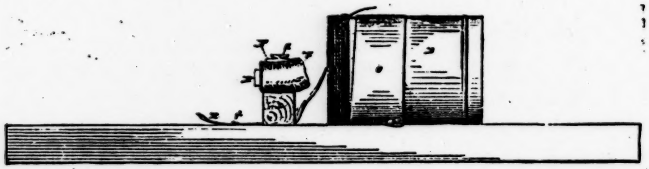
to in various parts of defendants' testimony, particularly in the depositions of Drawbaugh and Benjamin, and each of them is there mentioned as a marked improvement. (Benjamin, defts, ii, 1252, 1255–6; Drawbaugh, pp. 307, 340, *supra*.) There is no respectable indication when the form "F reproduced" was made, if ever, except the fact that no witness ever saw it; that they testify to seeing F in 1875, 1876, and afterwards, and that the low mouthpiece certainly could not have been devised when he made C, and the original I, whenever that was, so that "F reproduced" could not have

been made until after that. One trouble with "F reproduced," which of itself was particularly fatal to the transmission of speech by it, lay in the excessive difficulty of obtaining any adjustment which would transmit a word, and then of maintaining it long enough to transmit even a few consecutive words. This trouble which made Mr. Benjamin say that "the whole test with 'F reproduced' was in fact a constant trial for adjustment" (defts, ii, 1327) is referred to p. 556, *infra*. He acknowledges that in this respect F, with the single rod, would be inferior to "F reproduced." The change or other more efficient changes to the same end are so obvious and easy to make that it is certain that a fastidious and skilled workman like Drawbaugh would not have seriously used F for a week (whenever made) without throwing it away and making an instrument in which the parts should be mounted in a more stable form. This is the imperishable testimony of the instrument itself.

The kind of powder used in it greatly affects its performance. According to Drawbaugh's story this was the chief subject of experiment with F,—its forms were so simple that he could not have changed them in that particular instrument, — and according to his story he did not make another carbon transmitter until nine years after he made F; so that there were doubtless, on his own story, great improvements as regards the material used. Undoubtedly he used the best materials learned from this nine years' work (ending in 1876, if his story be taken). For his experiments with powders, *v.* pp. 298–302, *supra*. He is not willing to assert anything definite about those experiments.

Thus, finding that no apparatus which had "F reproduced" for its transmitting member could be a practical, operative, speaking telephone, or could do more than transmit occasionally one, or two, or three words, we know the fact to be that the instrument F, whenever made, was worse than "F reproduced," by some very large and considerable, but indefinite amount.

The same thing is true of the two instruments B, alleged to be an original, and the instrument falsely called "B reproduced." The differences are not so great, but in several respects "B reproduced" is materially better. For example, in B, the base board projects

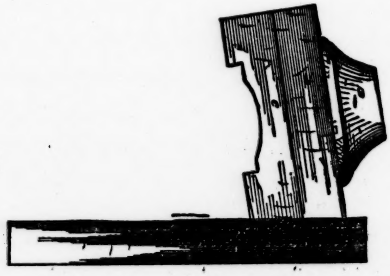


about four inches beyond the mouth of the tin can, so that the ear cannot be placed in close proximity to the can. In "B reproduced" the board has been sawed off close to the mouth of the can, so that the ear can be placed close to it. This is of great importance, for when the can is placed close to the ear, it allows the sound due to the vibrations of the diaphragm to come directly to it, without being diffused; and what is of more importance, it encloses the ear, and excludes external and disturbing sounds. As it was only with the utmost difficulty that any resemblance to articulation could be obtained by the so-called "F reproduced" and "B reproduced," it is manifest that this difference is of large practical importance, especially so, where, as is alleged by the defendants, the instrument B was listened to, not in a secluded closet, as in New York, but in a machine shop, with machinery running, or persons moving about. That is not all. The difference is so marked that it is impossible to conceive that a person could have kept B for a series of years, and used it repeatedly, without sawing off the board after the first time of trying it, if he got anything like articulation with it (complts. ii, 1306–7). If he used it for a receiver for a circuit-breaking transmitter, the sounds from which are very loud, he might well have kept it in its present condition. It appears affirmatively from the deposition of Mr. Benjamin (defts, ii, 1307), that the end of the board of "B reproduced" was sawed off for convenience in use. The drawing of "B reproduced" shows it before it was sawed off.

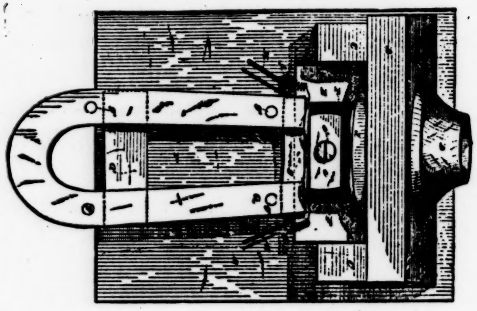
Again, the instrument B has its tin can fastened to the base board by a strip of tin, secured to the base board simply by one tack at each end. The board shows that it has never been secured in any other way: there are no tack holes in the board, except the two now filled with tacks. One trouble found with "B reproduced" was that in applying it to the ear the tin can slipped even under the

strongly screwed-down strap of that instrument, and slipping, threw the armature and magnet out of adjustment (Benjamin, defts, ii, 1307; Pope, complts, ii, 1307). This trouble would be so great with the flimsy attachment found on B that it is impossible to conceive that a man could have used it half a dozen times without remedying the defect. The defect would of course be easy to remedy; but the fact that it was not remedied is conclusive proof that the instrument was not constantly used, but was merely made as an experiment, tried once or twice, and thrown aside. This testimony of the instrument itself is stronger than any mere recollection; these details of obvious and easily remedied defects which so nice a workman as Drawbaugh would not have suffered for a week, are absolute proof that the rude instruments F and B, whenever made, were merely for temporary experiments, and could not have been the standard instruments for experiment and exhibition from 1867 till 1875, as all the defendants' witnesses would have the Court believe. The same is true of C, and to some extent of I. Again, it is alleged in the defendants' testimony, particularly by George Drawbaugh (defts, i, 628), and somewhat by Daniel Drawbaugh (defts, ii, 1030–2, 1102), that from time to time new membranes were required on B, and the mice eat off the old ones. Mr. Pope demonstrates that no second membrane ever was put on to the tin can. It could not have been done without taking the tin can away from the board. If it was slipped out from under the tin strap, it would be so loosened that when put back again it would not retain its position when in use. If one of the tacks were pulled out to loosen the strap, it could hardly have been driven into the same hole firmly enough to again hold the can well; and Mr. Pope points out that there are no tack holes in the board, except the two now filled by the tacks. The testimony of the instrument itself, therefore, is that it never could have been and never was used, as the Drawbaugh witnesses pretend, for seven years, week after week.

Pp. 1309–10. Mr. Pope then compares the remains of the instrument C with the instrument called "C reproduced," and points out the differences. So little of C is left that it is hard to tell what it originally was; but it is certain that the metal diaphragm now on it, and which is alleged by Drawbaugh (defts, ii, 812) to be the origi-



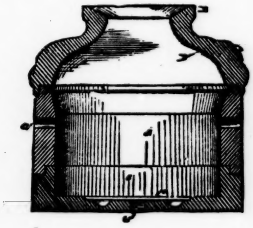
C as it exists. One fourth size.



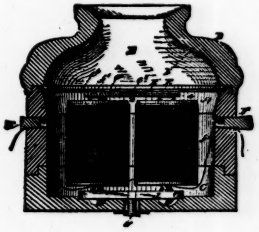
The so-called "C reproduced." One fourth size.

nal, must also have been much inferior to the diaphragm now on "C reproduced." The instrument "C reproduced" has a heavy permanent magnet applied to the rear end of the electro-magnet, and that magnet must be there in order that the instrument can be used as a transmitter. The very instant that Mr. Benjamin began to use the "C reproduced," he had that magnet clamped firmly to the base board, because it is almost impossible to use the instrument or to move it, unless the magnet be so clamped, without the magnet's dropping off, or, by its slipping, pushing against the electro-magnet and disturbing the adjustment. Yet, inspection of instrument C shows that if there ever was such a permanent magnet used with it, it never was fastened to the base board, for there is no screw hole or nail hole anywhere by which it could have been done. It never would have been used twice without a fastening which five minutes' work would supply (ans. 51, p. 1311).

The original alleged instrument I, and the instrument called "I reproduced" cannot be compared, because no part of the alleged original exists except the shell, but the instrument "I reproduced" is somewhat better in some respects than the instrument I as described.



I as produced. One fourth size.



The so-called "I reproduced." One fourth size.

Thus the defendants did not dare to make and try true reproductions of the alleged originals, but in every case made a better instrument.

Mr. Pope then, on p. 1313, describes the conditions of the test in New York.

The instruments were arranged on the second floor of a solid brick building, No. 4 East Fourteenth Street, where the sidewalk is twenty-five or thirty feet wide, and where there is very little passing of heavy teams to jar the building. The transmitters were placed in a rear room and the receivers in the front of the building on the same floor. The line was about eighty feet long. It was found that the battery transmitters employed, namely, "F reproduced," "O" and "H," possessed so little inherent stability that the slightest jar threw them out of operative adjustment. Therefore, they were placed, at first, on a heavy office table and no one was allowed to touch the table or move about the room. After the first day still greater precautions were taken. "H" was firmly screwed to the rear wall of the building. A heavy block of artificial stone which happened to be in the room was placed on the top of the table and "F reproduced" put on top of that and the operator took great care that no part of his person should touch the instruments or the table. The alleged original instrument "F" is made of a broken glass tum-

bler with a very uneven bottom, and it would be almost impossible for that to remain steady upon any support; "F reproduced" is an ordinary tumbler with a flat bottom. The speaking was done at first by Mr. Ernest Marx, who has a very good voice. Afterwards Mr. Klemm, one of the defendants, and Daniel Drawbaugh, undertook to talk: their voices are quite as good as the average, but their attempts to transmit were failures (Pope, p. 1319). They spoke through the instruments at the complainants' special request. Nearly all the talking was done by Mr. Hill, the defendants' counsel, whose enunciation is faultless, and whose voice is peculiarly even and managed with great skill (p. 1318). This is of great importance, because with each of the instruments tried a slight increase in the volume of the voice disturbed the instrument, made it "break," which is fatal to speech, or threw it out of adjustment.

The receiver and the person listening at it were placed in the interior of the building, in a closet, the heavy door of which was kept closed; the adjoining room was carpeted and no one was allowed to whisper or move about in it. All these precautions were found absolutely necessary; the slightest noise in the room adjoining the receiving closet prevented the hearing of any speech at all (p. 1314). The listening was done almost entirely by Mr. Park Benjamin, the defendants' expert, a few other persons taking the receiver from time to time for a few minutes.

After the first hour or two another line was run between the transmitting and receiving rooms furnished with the ordinary Bell magneto commercial telephones. This line, called the tell-tale line, was put up first in order to enable observers in the two rooms to know from time to time what was going on and check off the results. Before it was up, a messenger had been employed to pass backward and forward between the two rooms for this purpose, but that plan was found inconvenient and wasteful of time. During the remainder of the time in which the tests were going on the tell-tale line was also used to facilitate the adjustment of the instruments under test. Whatever was heard in the listening room was repeated back through the tell-tale line to the transmitting room, and in this way and by specific directions sent back every few minutes, the transmitting operator was enabled to know exactly the character of the

sounds produced, and thus to ascertain when he needed to alter the strength of his voice or to adjust the instrument (pp. 1317–8). Mr. Pope explains the importance of the precautions thus taken, without which the transmission of speech was found impossible by the alleged earlier instruments, and shows clearly that if the apparatus had been used without these precautions and in the manner in which the defendants' witnesses allege it was used at Drawbaugh's shop, no words whatever could have been intelligibly transmitted and understood by means of any of the earlier instruments. Some of these advantages are due to the differences between the alleged originals and the reproductions which have been noticed, the most important of which are in the transmitter F. Others are due to the conditions under which the apparatus was used.

In the New York tests the operators at both ends were special experts.

This is of great importance, because few persons, listening for the first time at a feeble telephone, would hear anything. The operators were not only skilled experts, but they were intelligent and cultivated men. Now, in listening for and trying to understand faint sounds, the difference between the two gentlemen who had charge of this apparatus in New York and the ordinary farmers and farm laborers who are alleged to have heard through the instruments in Cumberland County is enormous. As Mr. Pope well puts it, the difference lies as much in the mental as in the physical organization, and in his opinion much more so; it lies in the power of fixing the attention and taking note of slight distinctions (p. 1316). Again, in the tests in New York, after the first hour or two, a tell-tale line, so called, that is, another telephone line equipped with good modern instruments, — Mr. Bell's commercial magneto telephones, — was put up between the transmitting station and the receiving station. This was intended to be used merely to communicate and check off the results obtained; but, after a few minutes, the defendants began to use it for the purpose of adjusting their instruments. Mr. Pope, on p. 1317, explains the great advantage of this. With such instruments as F and B at each end of a single line, it would be a matter almost of luck and chance whether they ever got adjusted into condition fit to transmit a single word; but with the tell-tale line

alongside, and a skilled person at each end, the listener at B could instantly tell his associate at the transmitting end whether the adjustment of the transmitter needed to be a little closer or a little looser; and thus, by feeling, as it were, and by the instant communication between the two ends through a tell-tale line, some kind of practical adjustment could be reached. No such aids existed, and there were no skilled men to use them when the farmers tried to talk at Drawbaugh's shop.

Again, in almost every case the defendants, in their New York tests, had the advantage of the modern commercial instruments in another way. When attempting to use "F reproduced" and "B reproduced," they would first put on a modern transmitter, and knowing that no fault was to be found with that, they could adjust "F reproduced" up to as good condition as it was capable of being put into. Thus, by substituting good instruments at one end of the line, they could locate the defect, and, so far as the imperfections of the instrument permitted, could overcome it. This is of the utmost importance in this controversy, because it is alleged by the defendants, and, if you take their depositions for their face, it is sworn to by all their witnesses, that when they went to Drawbaugh's shop, all that he did was to connect up the instruments, and, without any delay or trouble, immediately talk through them; and this they swore to about F and B. The New York tests proved that this was absolutely impossible (p. 1319).

The conditions of absolute freedom from disturbing causes, such as jars of the transmitting instrument, and any extraneous noise whatever at the receiving station, were attained with remarkable perfection in New York, and were proved to be absolutely essential to even such worthless results as were obtained there with the so-called reproductions of the alleged earlier instruments. The defendants' witnesses say that they heard speech at Drawbaugh's shop without difficulty, and without special pains to preserve silence. In many cases it was admitted by them that the machinery was running; presumably so in nearly every case. The transmitter, it especially appears in many cases, and necessarily in every case where Daniel Drawbaugh himself listened, was put into the hands of an unskilled person. It is pretended by some witnesses — Smyser and U. R.

Nichols, for example — that the transmitter was placed in the hands of a son of Drawbaugh, five or six years old, and then that the witness and the boy's father went upstairs and listened. Merely holding in the hand such an instrument as "F reproduced," and still more, "F" in the form in which it is alleged to have existed, would have thrown it out of adjustment, and the enormous difficulty of adjusting in New York, even with the assistance of the tell-tale line, demonstrates that it would have been physically impossible for a boy of six years old, without such assistance or with it, to have got the instrument into a speaking condition, or to have kept it so while holding it in his hand, or even resting the broken bottom of the tumbler on a bench, long enough to utter a single word.

The Court sees that the defendants did not dare to use true reproductions of what they described the original instruments to be, nor under such conditions as existed in Drawbaugh's shop. If results had been obtained in New York, therefore, they would not prove what it was essential for the defendants to prove; but the fact that the tests in New York were conducted only under improved conditions and with improved instruments, and that even then such worthless results were obtained, is both an admission and a demonstration that no speech whatever could have been or was transmitted with the alleged original earlier instruments at Drawbaugh's shop. By that we mean the instruments alleged to have existed before D and E, to wit, F, B, C, I, A. Every witness who from recollection has sworn to conversations through those instruments has sworn to what is not true. It is useless to inquire how he has been led to do it. But when a ten-year-old recollection of comparatively ignorant and uneducated men on such a subject runs against the solid wall of fact, it is worthless, and the whole volume of testimony of which such recollections form the most important and principal part is thus demonstrated to offer nothing which the Court can rely upon.

Mr. Pope then (p. 1321) stated what constituted a speaking telephone apparatus. That is, it requires a transmitter at one end and a receiver at the other. This is of importance, because, in considering the character of the telephone apparatus possessed by Drawbaugh, whatever be the dates, we cannot take a single instrument, as A for example, and say that that is a telephone, and because with

a good modern transmitter it will yield speech, it therefore yielded speech in Drawbaugh's hands. We must pick out a pair, — transmitter and receiver, — and Mr. Pope shows that of the instruments alleged to exist before D and E, no pair could be made up which would practically transmit a sentence,—the occasional and uncertain transmission of a phrase of a few words was the utmost limit even in the New York tests.

Mr. Pope then presented a statement of what was actually accomplished with the instruments in the New York tests. He first made a general statement of what was obtained, and then presented what was spoken into the transmitter, and what was heard at the receiver, arranged in parallel columns. All the notes of both parties, there taken in long hand and in short hand, are printed verbatim in complainants, iv, exhibits, pp. 481–774. Mr. Pope's statement is prepared from these, aided in putting them together by his own recollection. No fault has been found with it.

His statement of the couples "F reproduced" with "B reproduced," and "F reproduced" with A, is as follows (complts, ii, 1323): —

"STATEMENT OF WHAT WAS ACTUALLY ACCOMPLISHED WITH INSTRUMENTS 'F REPRODUCED' AND 'B REPRODUCED' IN THE NEW YORK TESTS.

"*First Day*,— *March* 28, 1882.

"Mr. Benjamin remarked that all he expected to get was a sound, and now and then a word.

"Instrument adjusted by Mr. Drawbaugh. Mr. Benjamin listens. Ten minutes occupied in adjusting 'F reproduced' with Tisdel instrument as receiver. Then 'B reproduced' was tried as receiver.

"Up to the time the tell-tale line was put on the results were as follows: —

"Knew that some one was counting from one to twenty. Heard, '*I am now talking into — transmitter*,' or something of that kind; the words actually spoken were 'Old transmitter.' Heard, '*Galvanometer in circuit*'— part of a sentence, whole of which was, 'I am speaking into the tumbler instrument, with a galvanometer in circuit.' Heard correctly, '*Do you understand?*' Then several sen-

tences, of which only three detached words were heard. Then heard the words, '*Answering*,' '*What I say*.' Newspaper sentences tried, but none understood; this occupied thirty minutes.

"The tests then continued one and a quarter hours longer. 'F reproduced' used as transmitter and 'B reproduced' as receiver. A Tisdel receiver was substituted for a short time to adjust 'F reproduced' by. Tell-tale line here put in.

"What was supposed to be heard with 'F reproduced' and 'B reproduced' was '*I am speaking now into the old tumbler instrument; do you hear me?*' and the following words, parts of sentences: '*to send*,' 'have been' 'telephone,' '*and*,' 'about,' '*the*,' 'majority,' '*do you hear me now?*' 'how is that for high?' Sentence was, ('I see five cats.') '*I am speaking into the tumbler transmitter*.' '*I took*,' '*New England*,' '*music box*,' '*battery*,' '*adjourn for lunch*.' Words heard correctly are in italics.

"Irregular numbers were spoken into the transmitter. One hundred and thirty-eight numbers were spoken, and of these eighteen, and no more, were heard correctly.

"During the whole of this time the experiments continued incessantly; the attempts at talking did not cease except for the purpose of adjusting the instruments. The time occupied on 'F reproduced' and 'B reproduced' was about one hour and a half.

"Of the phrases thus supposed to be heard, only those words in italics were words actually spoken; the others were quite different from what was said. Fifty-five words correct, mostly detached words conveying no meaning. No sentence, except that about the tumbler transmitter, a very familiar and oft-repeated phrase.

"[*After this failure on the first day, the defendants did not attempt any further use of 'F reproduced' and 'B reproduced' together.*]"

"'F REPRODUCED' AND 'A.'

"*Second Day, — March* 29, 1882.

"This test on the second day lasted 50 minutes, from 5.25 to 6.15 P. M. Ordinary remarks and newspaper sentences were attempted; nothing was received except a few familiar stock phrases, such as 'Do you hear me now?' The following are all the words that were heard correctly: —

"'Answer back to me what I say to you.' 'March 21, 1882' — after repetition. 'To-day' — only word of a sentence. 'Did you hear what I said?' 'It is faint now,' 'How are you to-day.' 'Can you hear what I say now.' 'Do you hear me now.' 'Did you hear.' 'This is tumbler F,' after repetition. 'Can you hear what I say.' 'Very well, do you hear now what I say?' — after repetition, and not exactly what was said. 'Mr. Hoar . . . . . resolution,' part of a sentence. 'To-day,' only word out of a sentence. . . . 'How is that?' Sixty-eight words in fifty minutes.

"To accomplish this more than five hundred and fifty words were uttered into the transmitter. It is obvious upon reading what was heard, that it cannot be said that the instruments accomplished the transmission of intelligence. Reading the verbatim report of what was heard, conveys no idea whatever of what was said.

"Numbers from one to ten in regular order were counted nineteen times, and heard and understood seven times. Thirty-seven irregular numbers were uttered, and thirteen of them heard."

Newspaper sentences attempted to be transmitted by instruments "F reproduced" and "A," on afternoon of second day.

[*From Boston Daily Advertiser, March* 22, 1882.]

"'Washington, March 21, 1882. — The House to-day, by a strong vote . . . . (Not understood, and the rest of the sentence abandoned.)

"'Mr. Hoar offered a resolution' (Not understood, and no attempt made to transmit the rest of the sentence.)

The other sentences attempted were chiefly, 'Do you hear me now?' 'This is the tumbler F,' etc."

The notes taken at the two ends, while "F reproduced" and "B reproduced" were tried, during the first day, have not been so arranged. The notes of "F reproduced" and A, when first tried together, which was on the second day, are presented on p. 1325 of Mr. Pope's deposition. And perhaps as convenient a way as any of giving the Court an idea of the results will be to print consecutively what Mr. Benjamin, listening at the receiver, said that he heard. The words heard correctly are printed in italics. The importance of this test will be remembered; for this couple is much better than

the best that Drawbaugh pretends to have had before he made the instruments D and E. Not only "F reproduced" is much better than F ever could have been, but the conditions of the test in New York were infinitely better than any test that could have been applied or any use that could have been made of them by the defendants' witnesses in Drawbaugh's shop. If the Court will now consider that the best results which Drawbaugh ever could have attained by any instruments before D and E were worse by a very large and indefinite amount than these shown by these tests, it will begin to understand why Drawbaugh, having those instruments, if his story of dates be true, neither patented them nor offered them for use.

Second Day, — March 29, 5.30 P. M.

"F reproduced" and A on circuit.

Mr. Hill speaks into the transmitter and Mr. Benjamin listens at the receiver. By means of the tell-tale line, or otherwise, the listener even when he heard nothing was made aware that a phrase had been uttered. Only a few words — generally four to six — were uttered at a time, and then the sender was informed through the tell-tale line what the listener thought he heard or what remarks he made. The following were the remarks made, or the words which Mr. Benjamin, listening at the receiver, thought he heard. The words heard correctly are in italics (Pope, complts, ii, 1325) : —

[Each dash — indicates a phrase uttered into the transmitter.]

"Not heard. — Not heard. — What? — What? — Not heard. — Not heard. — Not heard. — [Further adjustments.] — Not heard. — Pretty faint. — Great deal louder but a peculiar twanging sound. — Not heard. — Nothing at all. — Not a thing. — Nothing at all. — Quite good; can't you give us a sentence? — *Answer back to me what I say.* — Too faint. — *March 21, 1882.* — *To-day.* — Not heard. — Not heard. — Too faint. — Little bit better. — A little better. — What was it; repeat it, that is pretty good. — *Did you hear what I say?* — Very faint. — *Yes, it is faint now.* — What did he say? Give a sentence. — That's pretty good now, keep it like that. — *How are you to day?* — Not heard. — The instrument breaks. — Not heard. — Too faint. — The instrument breaks. — Very faint. — Faint. — Not heard. — Not heard. — Very faint. — Too faint. —

Faint. — *Can you hear what I say now?* — Gone. — It was louder, but can't make out what it is. — Gone. — Very faint. — Very faint. Not heard. — *Do you hear me now?* — Don't understand. — Not heard. — *Did you hear what I said?* — What was that? — *This is the tumbler F.* — Too faint. — Nothing at all. — Not heard. — Nothing at all. — Not heard. — Not heard. — Heard nothing. — *Can you hear what I say?* (that's pretty good). — *Very well;* do you hear *now what I say?* (that's pretty fair, give me a sentence to try). — Don't adjust it again but go on. — Not heard. — Not heard. — Nothing at all. — Don't understand it. — Nothing at all. — Nothing whatever. — All spoiled now; it was good before. — Nothing whatever. — Not heard. — No. — [Instruments adjusted.] — No, I have not got a single word. — That's better. — Just heard the voice, but very faint. — [Several phrases spoken.] Nothing whatever, nothing yet. — [Several phrases spoken.] Too faint — just heard something — That is better. — Too faint. — Counted up to three or four. — [Two phrases here spoken.] — Heard that pretty good. — Too faint; could not hear. — [A phrase was here repeated three times.] — Could not understand the sentence. — Too faint. — [Two phrases here spoken.] — Something about the diaphragm. — Too faint. — [There was considerable speaking and counting for adjustment at this point, not taken down; Stenographer's notes in receiving-room show this.] — *Counted up to* 10, make it louder. — Quite good; give us a sentence. — No. — *Mr. Hoar — resolution.* — Not loud enough. — [Adjustments.] — [Several phrases spoken.] — No. — *1 to 10.* — [Further adjustments.] — *1 to 10.* — No. — That was pretty good — a few words in the same way. — No; repeat. — Get the words "*to-day*"; read just a little more. — No. — No. — *1, 2, 3, 4,* loud; *10* almost inaudible, and it tapered down between them. — As far as 3 this time, and then became silent. — *1–8,* and then became silent. — *1–10,* but weak at the end. — Got as far as that time; very faint. — No. — No. — No. — Put on the music-box and see if we can hear that. — [Music-box put on F.] — [Instrument adjusted; operator at transmitter directed to change adjustment gradually until Mr. Benjamin, at receiver, directs him through tell-tale line to stop.] — [Several phrases spoken]. — Didn't hear. — Didn't hear. — [Mr. Hill says,

'The carbon is caked; I want to have Dan arrange the instrument.'] — [Instrument adjusted; put in new battery cell, one prism Le Clanché.] — [Five phrases spoken.] — Didn't even hear that any one was speaking. — [Transmitter adjusted]. — Didn't hear. — How is that? — Don't get that. — Not heard. — No. — No. — No. — [Counting.] — *30, 7, 60, 26, 1, 3, 5, 6, 10, 13, 14, 95. — 69, 81, 94.*"

Does this Court from this obtain a clear understanding of the intelligence which the speaker was trying to convey?

On the third day of the test, "F reproduced" and "A" were tried again, with further and extraordinary precautions. The importance of these precautions is shown by the fact that the instruments were about twice as successful as they were on the second day. These precautions consisted in this: The least jar was found to throw the instrument "F reproduced" out of adjustment. So it was placed on a heavy block of artificial stone, itself placed on a heavy office table. No one was allowed to touch the table, nor to move or talk in the room. Even the operator took care not to touch anything. The talking was done by Mr. Hill, whose faultless enunciation and perfectly even voice gave results much beyond those which any other speakers could obtain.

"*Third Day.*

'F reproduced' and 'A.'

"Mr. Hill speaks into the transmitter 'F reproduced.'

"Mr. Benjamin listens at A.

"11.32, A. M. Words heard by Mr. Benjamin at the receiver 'A,' 'No,' 'Again,' 'Repeat,' etc., signify that the listener did not hear, demands a repetition, etc. Words heard correctly are in italics.

"*Counted up to* 10. —*What shall I do now? —Shall I read something?* — I will *read* you *something.* — Get nearer and speak louder. — Not heard. — *Do you hear* — noise? — Repeat it. — Repeat it. — Louder. — Not heard. — Louder. — Repeat me back what I say. — Go on and read from newspaper. — *Very well, I now will read.* — Go on and read. — *I will now read.* — It *will be* returned. — *If Pres. Arthur.* — Not heard. — *Does not immediately* retire *him.* — *Upon.*

Keep nearer to instrument. — Not heard. — We hear you; keep closer to the instrument and go on. — Not heard. — No, too weak, cannot hear. — Repeat. — *Take it off and put on the Tisdel.* — Tell him he counted all right, the instrument breaks; what do you want changed for the Tisdel? — Too faint. — Too faint. — Too faint, repeat. — Too faint, repeat. Heard counting to 8. — *Do you hear that* — very nice. — It *will be* returned. — *No, that was not right.* — *I will read from the newspaper.* — *New York Daily Tribune, March 29th.* — Not heard. — Not heard. — Not heard. — No — too weak. — Too weak. — Not heard. — Not heard. — No, instrument broke all up. — Broke again. — Broke. — *Did you get that?* — What was it? — Not heard. — Not heard. — *There is no reason.* — Please repeat. — *There is no reason.* — That *Mr.* Somebody. — Sounds like Mr. Blaine. [It was in fact 'Mr. Lowell.'] — Not heard. — *Mr. Mr. Lowell, our minister to England.* — *Should be* recalled. — *On account.* — Of the report. — Of *his action in the.* — Mansion case. — Louder. — Last word was *department;* what was before? — *Forwarded to the* State *Department.* — *Forwarded to the home department.* — *A memorial* address by a body of *Americans* while in London. — Not heard. — Not heard. — Not heard. — Transmitted *with the despatches.* — Not heard. — *Relating to the case.* — With *this country.* — Not heard. — From this country. — No — louder. — Not heard. — That *he has* contradicted. — Not heard. — The *official duty.* — The *action of the secretary.* — Did not get the other words. — Louder. — Not heard. — Not loud enough. — Go on. — *I will read another article.* — Not heard. — *Did you hear that plainly?* — Not heard. — Not heard. — *All right,* I'll read it. — Too faint. — All right, *how did you hear that?* — Not heard. — *Did you hear me then?* — Not heard. — *How plainly can you hear me.* — Now *listen and I will read.* — Too faint. — Not heard. — *The annual conflict between . . .* and Cannon. — Not heard. — Between who and Cannon? — I can't make out the name. — What? — Again [The word which was 'landlords' was here spelled three times; the other word, understood after six repetitions as 'Cannon,' was 'Tenants.']. — Spell again. — Vandeler. — Chandeler. — *Is now* advanced to *its height.* — Not heard. — Not heard. — Not heard. — Too weak. — Entirely *by Tribune reporters.* — No, spell it again [The word which was

'enquiries' was here spelled six times, but not understood]. — No, once more. — In Congress — Spell it again. — Once more, missed all but two or three letters. — Not heard. — Not heard. — Not heard. — *Do you now hear what I say?* — *How plainly do you hear?* — Too weak. — No. — *Is this any improvement?* — [Instrument constantly adjusted by Drawbaugh.] — *Let me read again.* — *The annual conflict between* Chandler and Cannon. — No. — *is now at its height.* — Reported entirely *by Tribune reporters.* — No. — No. — Is very far from being finished. — No. — *Do you hear me now?* — Too weak. — Not heard. — Not heard. — Not heard. — Not heard. — [Mr. Ott came in to know what the matter was; we have not heard anything for several minutes.] — [Drawbaugh goes to adjust instrument in receiving room, but returns and says Mr. Benjamin will not allow him to adjust it.] — *Do you hear this?* — *What instrument are you at?* — *Answer what instrument you have.* — *I will read again.* — Not heard. — Second visitation. — Not heard. — That's too loud. — Oh, no, — too loud — breaks. — No — worse. — Not heard. — *15 millions,* — *10 years.* — Not heard. — Not heard. — Not heard. — *What is the reason you can't hear now?* — *Let me say it again.* — Too loud — breaks. — Worse — breaks. — All broke. — Broke. — No — broke. — Broke. — Too loud. — Now, *try it again,* — *Fifteen millions* have been here. — Not heard. — Get the words *of Congress.* — By certain members *in their section.* — Not heard. — Broke.

"(After every four or five utterances directions were sent for the speaker to modulate his voice, as 'louder,' 'not so loud,' 'instrument breaks,' etc., and this change in the voice of the operator to suit the condition of the transmitter aided materially in getting such results as were obtained.)

"(My notes show repeated stoppages for adjustment of transmitter which are not here noted.)

"('A' taken off at 12.30 P. M.)"

This was not the claimant's earliest pair. A was the last receiver he made (so he says) before D and E. It is alleged to have been made in 1874, which, according to his story, was after seven years of work, and four or five years after he is alleged to have reached a

practically successful apparatus. Its best performance is alleged to have been with F. Drawbaugh testifies: —

P. 821, *Ans.* 230. "I used A with both C and the tumbler instrument F; the best results were with the tumbler."

P. 1046, X *Ans.* 1367. "Used with a magneto instrument A was not so good. . . . I thought it was a pretty good instrument when used with a battery and carbon transmitter."

There are more witnesses to it than to any instrument except F and B. "F reproduced" and "B reproduced" were so bad on the first day of the test that the defendants did not try them again: and then followed this demonstration with "F reproduced" and A. What does the Court think of this as an apparatus for the transmission of intelligence? How does this test by Mr. Benjamin himself bear out his earlier statements (defts, ii, 1256): —

"*Q.* 54. Please refer to the various instruments made by Mr. Drawbaugh, and state whether you find any, and if so, which ones, to be good, full-sized, practical working speaking electrical telephone instruments?

"*A.* All of Mr. Drawbaugh's instruments that I have tested I know to be good, full-sized, practical working, speaking electrical telephone instruments; and with regard to his instruments and forms of instruments, to which I have referred in my previous testimony, but have not tested, I consider that these, by reason of their form and construction, may fairly be included in that description."

And what confidence will the Court place hereafter in the testimony of the claimant, who said (defts, ii, 810): —

"*Q.* 178. During that time, and before you made instrument C, what results had you been able to get with instruments B and F?

"*A.* Sufficiently good to be heard distinctly; there were even words that were whispered; you couldn't just hear the words exactly, but could hear the whispering; I did that often; spoken words you could hear — the whole sentences; I mean words spoken out loud, and not whispering merely; *I would have persons in the cellar reading printed matter, — some advertisement or something, and I could hear the words that were read;* and at other times I would go down into the cellar and read something, and coming up they would repeat the words to me that I had read."

Mr. Benjamin says (p. 1226, last three lines of Ans. 29) that in testing "F reproduced" with "B reproduced," and "F reproduced" with A, the sounds received through the original instrument A were much louder and clearer.

They should therefore have been near perfection.

Is the Court disposed to believe that the farm laborers who visited his shop, — many of them,—"persons," in the plural,—could take F to the cellar and adjust and readjust it so as to transmit a newspaper advertisement through it?

Mr. Benjamin, in his apologies for failure, devotes a whole page (defts, ii, 1355) to arguing that it is much more difficult to transmit a newspaper article read from a paper than it is to transmit familiar phrases in a conversational tone, — and he is undoubtedly right. He also says, in substance, that to attempt to read a newspaper through a telephone is too severe a test for almost any instrument. He had forgotten that it was the test his client had sworn to, *before the instruments were tried.*

When the Court compares the very best results which the defendants were able to attain under the circumstances of these New York tests, and with the assistance of the tell-tale line to adjust by, with what must have been the results when either transmitter or receiver were in the hands of unskilled persons in a machine shop, and when the transmitter and receiver were either held in the hand of the operator, or placed on an ordinary bench, and when both of those instruments, particularly the transmitter, were much inferior to the ones used in New York, — the Court will have no difficulty, even if it should believe Drawbaugh's statement of dates, in perceiving why he neither patented his instruments nor offered them for use.

Another couple tried was "C reproduced" and "I reproduced." Mr. Pope's testimony about these was as follows (complts, ii, 1336): —

"'C Reproduced' and 'I Reproduced' alone.

"*First Day.*

"Each was first adjusted by trial with a Bell magneto-telephone, and then the two were connected. No complete sentence was understood. All that was heard with them were the following, besides detached words:

"'*Thirty men and thirty women were drowned in a*' —— '*what instrument?*' '*electric light,*' part of a sentence; '*can you hear that?*' part of a sentence; '*is a great invention,*' part of a sentence; '*Do you know?*' part of a sentence; '*Dan,*

can you hear me?' 'Did *you hear* that, Dan?' sentence spoken was, 'Can you hear me now, Dan?' '*Mr. Benjamin*,' part of a sentence; 'Can *you hear me?*' sentence spoken was, 'Do you hear me? I am now speaking to you,' and this was repeated; 'Did *you hear* that?' sentence spoken was, 'do *you hear* me?' '*Mr. Benjamin*,' part of a sentence; 'telegraph company,' 'at advanced,' 'per cent,' 'the manufacture of the,' none of these words were said; 'in June last,' — not what was said; '*What time have you?*' part of a sentence; in all fifty words." [Words heard correctly are in italics.]

"There were only two cases in which enough was understood to convey the meaning of a single sentence, and this only after repetition.

"Sixty irregular numbers were spoken into the transmitter; twelve of these, and no more, were heard correctly. These tests with 'C reproduced' and 'I reproduced' altogether occupied one hour.

"The defendants did not attempt to use these instruments together again during the three days of test.

"This experiment was interrupted for 'I reproduced' to be adjusted by opening it and inserting paper gaskets in order to change the distance between the armature and magnet. The time occupied in this is not included in timing the above experiment, but was employed in trying 'C reproduced' and a modern Bell magneto instrument together."

It will be remembered, however, that one half of the defendants' witnesses swear to F and B, and only two or three — and their dates are overthrown — pretend to have tried C and I.

Mr. Pope then testified (p. 1337): —

"*Q.* 75. Will you state what the tests in New York show as to whether an apparatus composed of the instrument marked 'F reproduced' as a transmitter and 'B reproduced' as a receiver constitutes a practically operative speaking telephone apparatus, by means of which intelligence can be transmitted from one station to another?

"*A.* In my opinion the tests of these instruments demonstrated conclusively that it was impossible to effect the transmission of intelligence by means of them, and that they, therefore, cannot be said to constitute practically operative speaking telephone instruments. Not enough could be understood of any sentence to convey an intelligible idea of its meaning, except in the case of a few familiar and often-repeated phrases which were capable of being recognized by their rhythm, even when articulation was altogether absent.

"*Q.* 76. Suppose you had two sets of the instruments, referred to in the last question, connected upon two separate lines between two stations, so as to have at each station the transmitter of one line and the receiver of the other, could you by means of such two sets

of apparatus carry on conversation or make inquiries and receive replies with such success as to be of any practical utility?

"*A.* Judging from the results obtained in the tests, I am certain that it would be absolutely impossible to converse to and fro under the condition mentioned in the question. Nor could a question be asked and an intelligent reply received.

"*Q.* 77. Judging again from these same New York tests, would or would not such a set of instruments as those marked 'F reproduced' and 'B reproduced' be of any practical utility as a means of communicating between distant stations by word of mouth if no better speaking telephone apparatus existed?

"*A.* I cannot conceive that they would be of the least practical utility for such a purpose.

"*Q.* 78. Will you please answer the questions number 75, 76 and 77, substituting instrument 'A' as the receiver in place of instrument 'B reproduced'?

"*A.* I make the same answer as to 'F reproduced' and 'A,' although I think the results of the tests were a trifle better when 'A' was used in place of 'B reproduced.' The difference, however, was not sufficient to enable me to say that the second couple was a practical apparatus, or that it accomplished the transmission of intelligence any more than the former ones mentioned.

"*Q.* 79. Will you please answer the same questions, substituting as the couple 'C reproduced' as transmitter, and 'I reproduced' as receiver, in place of 'F reproduced' and 'B reproduced'?

'*A.* The results with 'C reprodueed' and 'I reproduced' were no better than with the two couples of which I have already spoken; in fact, I think they were worse, if anything. I therefore repeat my answers to questions 75, 76 and 77, in reply to your question as to 'C reproduced' and 'I reproduced.'"

The defendants also produced certain instruments alleged by them to have been made by Drawbaugh, after the date of the Bell patent, and concerning these Mr. Pope testifies as follows (complts, ii, 1339):—

"*Q.* 80. You have now testified concerning the practical utility of all the couples tried at the New York tests, which were entirely made up of instruments alleged to have been made before the date of Mr. Bell's patent of March 7, 1876, or of so-called reproductions of said instruments, four out of the five being so-called reproductions; the differences between these so-called reproductions and the alleged originals having been already pointed out in your answers 31 to 55 inclusive. In order to push the inquiry further, I requested you to prepare, in a similar way, a summary memorandum of the tests of all couples tried in New York, one member of which was an instrument alleged to have been made before the date of the

Bell patent, or was styled a reproduction of an instrument alleged to have been made before the date of the Bell patent of March 7, 1876; if you have done so, will you please produce it and read it as part of your answer?

"*A.* I now produce, as part of my answer, a statement showing the results obtained with pairs of instruments as called for in the question, the instruments thus tested being as follows: —

"'F reproduced' and a Tisdel magneto telephone.
"'F reproduced' and a Bell magneto telephone.
"'O' and 'A.'
"'H' and 'A.'
"'H' and 'B reproduced.'
"'H' and 'E.'

"This statement is made up in the same manner as the previous one which forms part of my answer to question 74. It is as follows: —

"Result of the New York Experiments made with couples of instruments, of which one individual instrument is alleged to have been constructed, or to have been a reproduction of one constructed, before March 7, 1876, and the other at some more recent date.

"*Pairs of instruments thus tested.*

"On the first day 'F reproduced' and a Tisdel receiver — which is a modern magneto telephone with all the improvements in practical use and in a good form — nearly as good as the ordinary Bell magneto, was used. It is the infringing instrument. On the third day 'F reproduced' and a Tisdel, also 'F reproduced' and a Bell magneto receiver.

"For the purpose of adjusting 'C reproduced' and 'I reproduced, on the first day, before trying these two in conjunction, each was tried for some little time with a Bell magneto telephone.

"O and A were tried and also H and A. H was tried with 'B reproduced' and with E as receivers on the first and second days.

"'*F reproduced*' *and a Tisdel.*

First Day.

"Little or nothing made out at the receiving end. Portions of sentences: 'I am talking — do you understand — can you hear me now?' regular numbers and single words out of a sentence were heard and understood. Many sentences were spoken and nothing of

them understood or occasionally single words out of a sentence. These two instruments were connected up three different times on the first day, adjusting each time by making use of a Tisdel or Bell receiver instead of 'B reproduced.'

"On the third day 'F reproduced' was arranged in the most careful manner (being placed on a heavy block of stone) and was used as a transmitter in connection with a Tisdel magneto receiver and a Bell magneto receiver, with the following results: —

"'F reproduced' as transmitter; a Tisdel magneto as receiver. Mr. Hill speaks; Mr. Benjamin listens. Words heard correctly are in *italics.*"

[In Mr. Pope's deposition (complts, ii, pp. 1340–8) the utterances of the transmitting operator and the utterances of the receiving operator are printed in parallel columns. We have here reprinted the utterances of the receiving operator only.]

" *Do you hear me now?* — Not loud enough. — Clearer, but not quite loud enough. — *Shall I read an article for you now?* — *All right* — *I'll read.* — *New York Tribune, March 29.* — *Southern education.* — Not heard. — Not heard. — *15 millions* only. — No, *15 millions a year.* — Not heard. — Not heard. — Not heard. — Not heard. — Too weak. — *What is the matter?* — *Do you hear me now?* — Not heard. — *How plainly can you hear?* — How is it now, about the same? — Repeat it. — *No, that is not what I said.* — Not heard. — No, repeat. — *Have you heard of Judge Wallace's appointment? How do you like it?* — Not heard. — *Judge Blatchford is* not *in town.* — I said 'is not *in town.*' — Not heard. — *Is Mr. Storrow near you?* — Not heard. — How far can you understand *what I say?* — Not heard. — Did you hear then *what I said?* — Faint; say it again. — *I said no, that is not what I said.* — Now I will read you *something about Senator Logan.* — No. — No. — Not heard. — Not heard. — Not heard. — It is not. — Not loud enough — Not heard. — Not heard. — How *do you hear me?* — Hallo. — *How do you hear me?* —(Tisdel receiver taken off and Bell receiver substituted. Reproduced F still used as transmitter.) — *Hallo!* too weak. — *Do you hear me now!* — Not heard. — *I will speak louder.* — *How is that — better or worse — how is that?* — *Do you like the Bell receiver better than the Tisdel?*

"*Do you hear more plainly through the Bell?* — Very well, *I will adjust it again.* — *Hallo.* — *Can you hear me now?* — *Plainly.* — *All right.* — *Dan Drawbaugh is standing by my side.* — *Do you* wish *me to read?* — *All right, I will.* — *New York Tribune, March 29.* — Saturday's edition. — Not heard. — *15 millions.* — Do you hear me now? — Not loud enough. — *I will read another article.* — *Postmaster General Howe.* — *Has* what? — Not loud enough. — *Has a way of* — *Putting his feet upon the centre-table,* — Too faint. — Repeat. — *During an interview.* — Not loud enough. — *In such a manner.* — Not heard. — Not heard. — Not heard. — Not heard. — Not heard. — Not heard. — Not loud enough. — No. — [The listener here answered 'too loud — good — not good — no — bad' — etc., during a considerable time while adjustment was going on.] — Too much sputtering. — No — bad. — Still bad. — Very loud, try it again. — Try it again. — Once more — try it again. — Too loud. — Too loud. — No — too loud; the instrument broke. — Not clear enough. — Was that *better?* — Was that *better still?* — Please repeat that. — Was that *better* — pretty good. — Instrument breaking a little. — Say that again, louder. — *Do you hear me now?* — *Do you get it better now than before?* — Are you ready to go on with the *reading now?* — Go on. — "

The foregoing is about one half of the test. The second half likewise reported by Mr. Pope is not materially different.

Mr. Pope then continues (complts, ii, p. 1348) : —

"This test of 'F reproduced' and the Tisdel receiver lasted twenty minutes, and that of 'F reproduced' and the Bell magneto receiver fifty minutes. This experiment, lasting one hour and ten minutes, most of the time with the best modern receivers, showed the inherent vice of an instrument of the type of F, even with the material improvements adopted in 'F reproduced.' The whole test, like that of 'F reproduced' with 'B reproduced' and also with 'A,' was a continual trial for adjustment. The listener had sufficient skill and understanding to indicate to the skilled operator at the transmitting instrument when it should be adjusted, and whether higher or lower, whether the voice should be louder or softer, or whether the speaker should place his mouth closer to or further from the instrument. This would have been impracticable had either operator been unskilled, and equally impracticable if the tell-tale line had not been available.

"Occasionally, by what can hardly be considered more than a

happy accident, the exact condition of adjustment was reached, and sentences would come through the improved modern receiver with success, but the mere effort of speaking would throw the instrument out of adjustment after a sentence or two, in spite of the most careful modulation of the voice. It was thus apparent from this trial that the sensitiveness of the improved Bell magneto receiver enabled the listener to recognize sounds and words that would have been unintelligible with such instruments as 'B reproduced' and 'A,' and thus to adjust the transmitter with greater pressure, which gave a more stable condition and greater freedom from breaks, while the feebleness in the effects which was the necessary consequence of that condition, was yet sufficient to give audible results with the sensitive receiver, though insufficient to produce sensible effects with the ruder receivers; yet no matter how efficient the receiver was, no apparatus which had 'F reproduced' for its transmitting member would be of any practical utility for the transmission of intelligence."

Then "C reproduced" was connected with a modern Bell magneto and "I reproduced" was connected with a modern Bell magneto. In each case some sentences were transmitted and many failed of transmission (Pope, complts, ii, 1349).

Tests with H. It is not pretended that H was made until after the date of the Bell patent. Its capacity is, therefore, immaterial, and the presence in the record of tests of it is simply illusory, unless the Court bears that fact in mind. As the defendants have introduced them, we refer to them. They are detailed in Mr. Pope's deposition, pp. 1360–8. The results were that in the hands of the most skilful speaker present (Mr. Hill), with a good receiver, with the greatest precautions and under the most favorable conditions, it will transmit intelligibly; but in ordinary hands, and even when Drawbaugh spoke into it, and under the favorable conditions present in the New York tests, it "breaks" so badly that no complete sentence can be understood. It is not capable of going into commercial use. Mr. Benjamin says that the chief difference between it and the highly successful Blake — the instrument in universal use — is that the Blake has and H has not the inertia-weight, or load on the spring-carried back electrode. The consequence is that when H is adjusted to a given tone of voice, the slightest change in the tone, or the slightest jar of the instrument, produces a break, and the sounds cease to be intelligible. It makes the difference between an instrument people want and one that nobody wants.

Mr. Pope testified of it — and the actual results bear him out — as follows: —

P. 1360. "This apparatus [H with E] could be successfully used by experts of skill and training, but is totally impracticable for ordinary use by the public as telephones are used."

He repeated and explained this more at length in ans. 100, pp. 1379–80.

Mr. Pope (p. 1370) then described the radical vices in the construction and operation of "F reproduced," which prevent it, or anything substantially like it, from being a practical instrument. They are, that, although with a very nice adjustment, the requisite kind of operation can be performed to some very slight extent while the adjustment lasts, it is almost impossible to obtain that adjustment, except as a matter of accident; and impossible to maintain it, because the slightest jar in the room, or even the disturbance due to the voice, will throw the instrument out of adjustment. Mr. Benjamin stated in his deposition, that at one extreme of the adjustment by which sounds could be transmitted, the pressure was such that the variations due to the voice only made sufficient change to produce sounds barely audible; at the other extreme the pressure was so light that the variations produced by the voice broke the contact at each vibration, and the sounds became loud, but entirely unintelligible. Mr. Benjamin said (defts, ii, 1328): —

"The capacity of the instrument seems to range between the production of sounds loud enough to be heard at three feet distance, perhaps, from the receiving instrument, to those barely audible in the latter; and the change from one extreme to another is effected by the movement of an adjusting screw over an infinitesimal fraction of an inch."

Mr. Pope stated — what is fairly to be inferred from Mr. Benjamin — that the range within which *articulation* could be transmitted was very much narrower (p. 1375). The total change from the loudest sound to no sound, Mr. Benjamin says, is effected by the movement of an adjustible screw over an infinitesimal fraction of an inch, while the range in which articulation is possible is much less than this. Mr. Benjamin speaks of the remarkable delicacy required in the adjustment; he says (defts, ii, 1327): —

"The whole test of this instrument F [by which he means 'F reproduced'] with a Bell instrument was, in fact, a constant trial for adjustment."

Drawbaugh says that a tin diaphragm, such as is on "F reproduced," was better than the bladder his witnesses had sworn to, "because that would not require so much adjusting — so frequent adjusting" (defts, ii, 1032; p. 340 *supra*).

Mr. Benjamin, referring to the fact that "F" had only one rod and "F reproduced" has two in the form of a yoke, that "the yoke support would be the better of the two as affording more positive means of adjustment" (defts, ii, p. 1255). He alleges that the difference would not be material, but the Court can see that it would. Considering the results obtained in New York, what could have been got with an instrument inferior as respects adjustment, and in the hands of the unskilled persons who handled it when Drawbaugh was at the receiving end?

Then Mr. Pope referred to certain other inventions alleged to have been made by Drawbaugh, and on pp. 1382–4 stated that the clock, the magneto key, the dial telegraph, and the automatic fire alarm, which he had caused his neighbors to believe were original with him, had been known and published in books twenty years before.

His cross-examination turned very largely upon the inventions of Mr. Gray, which are of no importance in this case. The cross-examination on pp. 1404–12 was upon the details of the instrument which he caused to be made, at the Western Union factory, in accordance with Mr. Bell's patent. Then he was cross-examined for the purpose of showing that with some of the various instruments in the New York tests certain words and phrases were transmitted, which was true; and when all that was transmitted in the course of an hour or two, with "F reproduced" and various receivers, including the modern commercial instruments, is put together, it makes quite a number of lines. But still the fact remains, that all that was accomplished with those alleged early instruments in New York was the occasional transmission of a few words out of a large number, but not enough to make the instruments worth using, and that any instruments alleged to have been used at Drawbaugh's shop, and under the conditions there existing, were such that the defendants did not

dare to try them, and could not under those conditions have transmitted anything.

He was cross-examined somewhat as to the alternative form of telephone referred to in the Bell patent, to wit, one in which the transmitter operated to vary the resistance of circuit. He states (p. 1425) that instruments to operate on that principle are not so described in the Bell patent that a man could at once be sure of making one talk, but such description is given that a person skilled in the art at the time could construct one, not without experiment, but without any invention. He described some of the modes of varying resistance to the circuit without breaking it, which were known before the date of the Bell patent (ans. 332, p. 1432). His opinion is finally summed up as follows (p. 1427) : —

"*A.* 308. It no doubt required experiment, at least to some extent, but I do not think it required invention to embody the apparatus in some form by which the results aimed at could be attained. There was, no doubt, abundant room for invention in using and carrying out improved practical forms or organizations of parts whereby improved practical results might be reached."

In the cross-ints. 237 to 243, the defendants suggested a hypothetical structure for the instrument F, and asked whether the difficulties mentioned by Mr. Pope would not be overcome by that structure. On his redirect examination (p. 1444) he showed that it was impossible that such a construction could ever have existed in F.

The defendants have made a good deal of talk about the special means for adjustment which they allege is required to make a magneto telephone work. In the first place, we have demonstrated, not only by theoretical considerations, but by actually making instruments without any adjustment whatever, and by the fact that no adjustment is used in any of the several hundred thousand magneto telephones now in use, that it is not necessary (see pp. *supra*). Second, Mr. Pope testifies (p. 1299 ; x-ans. 408, p. 1453 ; ans. 424, p. 1457) that it was a part of the common knowledge and practice of electrical constructors to put adjusting screws and other equivalent devices for adjusting all kinds of electrical instruments, including the adjustment of the distance between the armature and electro-magnet, — such contrivances being provided in every telegraph instrument in use. If it

were necessary, or even convenient, to have such adjustment, it need not be mentioned in the patent; the state of the art would give the needed information.

It was proved by Mr. Watson (complts, i, 330), that the magneto instruments which were in commercial use by the complainants, to the number of 100,000 or more, have no means of adjustment. In the first few that were made in 1877 a screw was provided, but a very short experience showed that it was unnecessary, and that it was only a source of mischief from the disposition of users to turn every adjusting screw that is visible, so that the parts are now each firmly and immovably fastened to the handle, the distance between magnet and armature being normally between $\frac{1}{64}$ and $\frac{1}{32}$ of an inch, which answers with the very powerful magnets now employed.

DEFENDANTS' PROOFS IN SURREBUTTAL.

From the time the complainants closed their reply until the defendants closed their surrebuttal was ten months. During this time the defendants took one hundred and ninety nine depositions. A few of them were legitimate rebuttal; most of them were cumulative; that is to say, they were depositions to specific facts already testified to; and these additional depositions would not be needed if the Court should believe the witnesses previously introduced by the defendants. A large part of this testimony related to the Draper-Kissinger hydraulic ram, and to the alleged destruction of bridges on the Yellowbreeches Creek in August, 1873. These portions will be considered by themselves.

At the time this testimony was taken the controversy was three years and a half old. It had excited great local interest, and of course the local desire was that Drawbaugh should win his case. It does not need much evidence to show that it was the subject of general talk and gossip in every grocery store, post-office, and almost every family during that time. The number of witnesses produced in this surrebuttal, as well as the character of those witnesses, shows that the defendants have scoured the country for everything which may be supposed to assist them. We are justified, therefore, in assuming that any important testimony which in the nature of things must exist if their story be true and which they have not produced cannot be found, and that the neighbors and intimates of the shop who are not among the three hundred and fifty called, find nothing in their memories, even now, which can help the defence. If the witnesses called for the first time in this surrebuttal, and who were interviewed by the defendants' counsel in 1881, had then remembered the apparently important stories which they testify to in 1884, they would certainly have been called at that time. Their present testimony is due, not to the memory of the man, but to the gossip with which he has been surrounded. In the expressive language

of Judge Swayne, "Their ears have beguiled their memory." We shall find, in fact, a number of cases where the witnesses who in 1881 could not remember anything, now, in 1884, profess to remember what if true is a strong and useful story.

The defendants had called in their first set of proofs more than a hundred witnesses to prove the existence of a practical instrument at Drawbaugh's shop before the date of the Bell patent; and if they could be believed, it was enough. Evidently the defendants did not feel easy. What their case needed after that was not more testimony, but better testimony, and that which they have produced in surrebuttal and subsequently is weak in itself, and far weaker than that which they originally produced. The introduction of testimony so weak compared with what could have been produced if their story were true not only does not help their case, but injures it.

They have sought to impeach some of the complainants' witnesses by having their witnesses swear that five, ten or fifteen years ago they heard ours make inconsistent statements. The weakness of such testimony is universally admitted. That produced by the defendants is peculiarly feeble, for it professes to be the recollections of men about ancient conversations which did not interest them at the time, and which they had not thought of since.

The defendants' surrebuttal proofs can conveniently be thrown into certain groups.

The Evans Family. The witnesses composing this group are: —

No. 141. *Jacob Evans*, defts, iii, surbtl, 88.
No. 136. *Mrs. Jacob (Mary A.) Evans;* defts, iii, 61.
No. 129. *Andrew Evans*, defts, iii, 1.
No. 134. *David Evans*, defts, iii, 52.
No. 139. *Moses Evans*, defts, iii, 78.
No. 138. *Elizabeth Evans*, defts, iii, 78.
No. 135. *Sarah Evans*, defts, iii, 55 and 86.
No. 133. *Mrs. Margaret J. Erb (M. J. Evans)*, defts, iii, 47.
No. 140. *Mrs. Elmira Rentzel (Elmira Evans)*, defts, iii, 83.

In connection with their testimony is to be read that of —

No. 130. *Ambrose Knaub*, defts, iii, 38.

No. 131. *Mrs. Ambrose Knaub*, defts, iii, 42.
No. 132. *Henry Klugh*, defts, iii, 44.
No. 137. *Jacob Hurst*, defts, iii, 75.
No. 204. *John Simmons*, defts, iii, 427.
No. 141. *John M. Fisher*, complts, iii, 2100.
No. 142. *George Ditlow*, complts, iii, 2122.
No. 150. *Elias F. Garman*, complts, iii, 2334.
No. 359. *R. A. Ross*, defts, iv, 231.

Generally stated the nature of this testimony was as follows: — *Jacob Evans* testified for the complainants at Philadelphia (complts, ii, 974). He lived in or near Milltown in 1872, and again from November, 1874, until the spring of 1881, which was after this controversy began. His wife Mary was a Miss Ditlow, and was born and brought up close by Milltown. In June, 1881, Drawbaugh took Jacob Evans to Harrisburg, and he was questioned by the defendants' counsel. They showed him the exhibit instruments and did not call him (complts, ii, 985). In June, 1882, the complainants visited him and his wife. These interviews were such that the complainants subpœnaed both Mr. and Mrs. Evans to come to Philadelphia and testify. Mr. Evans came and testified that he never knew of a speaking telephone at Milltown until the latter part of 1877. Mrs. Evans would have come, but was sick, and could not leave home. During the whole of this controversy Mrs. Evans has been in the habit of frequently visiting the families of Drawbaugh and his principal witnesses at Milltown. It must be taken as certain, therefore, that during all this period, and down to a time after Jacob Evans, with his wife's knowledge, had testified for the complainants, neither he nor she had any recollection of speaking telephones at Milltown during any time material in this case, although Drawbaugh and his friends had tried to arouse their memories. They are now recalled, and their depositions are offered to prove an operative instrument in December, 1875.

The story told is that on a day which, according to the face of their depositions, is fixed as Sunday, Dec. 5, 1875, Andrew Evans, Margaret Jane Evans, now Mrs. Erb, and Sarah Elizabeth Evans, visited their brother Jacob at Milltown, going on Saturday afternoon

from their father's house a dozen miles off and returning home late on Sunday afternoon. They allege that on this visit Jacob, his wife, his brother Andrew and his two sisters all went to Drawbaugh's shop, and there Drawbaugh talked through the telephone to Jacob, but the others did not take the trouble to listen. They say that in September, 1878, the same Margaret and Sarah, with their brother Andrew, visited Jacob, then also going on Saturday and coming home on Sunday, and that at another time, which Andrew guesses was probably in 1879, he also went to visit his brother Jacob; he says that nothing was known or heard of any talking machine at this latter visit.

It is further alleged that on their return home from the visit they mentioned to several members of the family that they had seen a talking machine at Drawbaugh's shop, and those persons are called to swear to their recollections on that subject.

The first question is, whether there is any truth in their story at all, and the next is, whether it was in 1875 or whether it was in 1878, or in some other year, that they saw telephones at the shop. The first observation is, that the change of front of Jacob and his wife shows a state of memory which can hardly be reconciled with honesty. It certainly cannot be reconciled with any valuable memory. For, during their interview with Drawbaugh in 1882, and during the cross-examination of Jacob, in January, 1883, the claimant was not able to bring to their minds nor even to suggest in cross-interrogatories any occasion when he thought that any of them had known anything about a talking machine. Substantially, therefore, his recollection contradicts them now, for plainly he recollects nothing of the alleged exhibition. It is pretty clear that this change of front on the part of Jacob and his wife, and on the part of her two brothers, Abe and Joseph Ditlow, presently to be considered, is largely, if not wholly, due to the woman Mrs. Evans. What turned her around so fiercely does not appear. It can hardly be doubted that there must have been something. Finally, the witnesses themselves do not now offer any reliable recollection. Jacob does not pretend to have any substantial memory of the visit, and hardly does more than assent to statements which the defendants' counsel put into his questions. Andrew, the most important witness of the

whole, because all the others made a visit in 1878 and Mrs. Evans saw the instruments in 1878, is of extraordinary stupidity.

Upon the question of date, in favor of 1875, is the statement of the witnesses that they visited the shop at their first visit to their brother, and not at the second, and the statement that they saw Kline's patent axles at the shop; that, however, is not of much value, because the gossip which talked telephone into them would have talked some corroborative circumstances such as the axle. There is also the testimony of the persons who say that it was after their return in 1875 that they heard these persons speak of a talking machine.

The testimony of Ambrose Knaub is of some weight in that respect, because Andrew Evans lived with him in 1875 and never again; on the other hand Knaub lived on the next farm to the Evans family, so that it is not only possible but probable that he heard of the talking machine from them at a later date.

The date is with all of them a mere question of memory and power of association. More turns on the testimony of Andrew Evans than any other, because he says he never was at Drawbaugh's shop with his sisters except in 1875, although he was there at a later date, which he does not fix very well, but thinks it was about 1879. And strangely enough, although the Drawbaugh testimony is that the shop was full of telephones in 1879, he says he neither saw nor heard of them then.

There are certain other facts which clearly show that the visit was in 1878. They speak of Drawbaugh's electrical clocks, always referring to them in the plural, however, and some of them say that they saw several. The other witnesses admit that they mentioned these on their return home. Now in 1875 there were not several clocks, but in 1878 there were. They were asked to describe the different rooms they went into and the different instruments, and although their descriptions are not very precise and accurate nor entirely consistent with each other, they are such as to exclude the condition of rooms and partitions which existed in 1875, and to correspond very well to the condition which existed in 1878. There are some passages in their description which would fit both, but there are also other passages which cannot be attributed to anything except the rooms and partitions as they existed in 1878.

Again, Mrs. Evans stated explicitly and in terms, that at that visit Drawbaugh spoke of his machine as a *telephone*. The proof is equally explicit from many witnesses that Drawbaugh never spoke of his machine as a "telephone" until after 1876; that up to that time it was invariably called a talking machine. Finally, Sarah Evans testified (p. 87) that on the Sunday of their visit, which, if their testimony be worth anything, was Dec. 5, 1875, the weather was chilly, but that there was no rain nor snow falling. We proved from the weather returns in the newspapers, that on Dec. 5, 1875, there was a disagreeable, cold and incessant rain. The condition of the weather on the occasion of their visit (whenever it was) does not rest merely upon Sarah Evans's memory, because the proof, both from her and from her father, is that when their brother took them home he did not drive them up to the house, but left them in the lane to walk up after dark in the evening. Clearly, therefore, the visit which she was testifying about was *not* on Sunday, Dec. 5, 1875. This date is not given as a mere immaterial matter; Andrew Evans and his book, Mr. and Mrs. Knaub, and Jacob Hurst were required on direct examination to fix this precise day, and unless they are right in this their recollection falls to pieces.

The details of the testimony of these witnesses are as follows: —

No. 129. *Andrew Evans*, defts, iii, 7. — Saw D, E, B, C, in December, 1875; Jacob Evans listened at one of them, but Andrew does not identify it. Drawbaugh went into another room to talk, and Andrew does not know what he talked into. Mentions clocks in the plural, pp. 25, 26, 31, 32, 33, 34, 35, 37; description of rooms, pp. 7, 28, 30, 31, 33, 37. Began to work for Ambrose Knaub, Nov. 8, 1875; fixes this by what he calls a book entry. Worked one month; visit to Eberly's Mills was near the end of that month, and on the last Sunday in it, p. 4. The calendar shows that this would be Dec. 5, 1875. Admits that entries in his book are not reliable, and have to be corrected by memory (p. 22). Drawbaugh was in "pretty big glee" about his talking machine; more so than he was about any other machine (p. 29). This witness was very stupid, and his memory very bad, see pp. 10, 22, 27, 34, 35, 36, 37. He had no curiosity to see the instruments or listen to them

(p. 29). He made a second visit to the shop which he finally thinks was in 1879, but he has no memory about what he saw then (p. 9).

It is pretty difficult to believe that Drawbaugh was more enthusiastic about talking machines in the fall of 1875 than about anything else, in the face of the article which his friend Holsinger wrote within a month in the Carlisle *Mirror* about Drawbaugh's work, speaking of the clock, and that Drawbaugh was getting it ready for the Centennial, but saying nothing about any talking machine.

No. 130. *Ambrose Knaub*, defts, iii, 38. — Swears that the date of Andrew Evans's visit was the second Saturday after Hurst's funeral. On Andrew's return he told him that he had seen the talking machine; Andrew Evans lived on his father's farm, which was the next to Knaub's until they moved away (p. 42).

No. 137. *J. Hurst*, defts, iii, 75. — His father was Ambrose Knaub's landlord and died Nov. 18, 1875; was buried Nov. 20. In point of fact, though he does not so testify, Nov. 20 was Saturday, and the second Saturday after that would have been Dec. 4. The last Sunday in the month beginning Nov. 8 would also have been Dec. 5.

No. 131. The wife of Ambrose proves the fact of a visit to Dan by Andrew, and that he spoke about some curiosity when he came home, but does not remember what it was.

No. 132. *Henry Klugh*, defts, iii, 44. — Fixes the date of building a barn on Moses Evans's farm, Andrew Evans having testified that the visit was made the year when the barn was built.

No. 145. *Alexander Underwood*, defts, iii, 114. — Fixes date of building barn on his farm occupied by Moses Evans.

No. 133. *Mrs. Margaret Jane Erb*, defts, iii, 47. — Sister of Andrew Evans, was with Andrew on the visit in the fall of 1875. Her visits to Jacob were as follows: 1875, with Andrew, Sarah, Maggie. September, 1878 (she could not at first fix the year, but it was afterwards fixed), with Sarah, Maggie; 1879, with Maggie, Ella. It will be observed that this visit of 1878 was the same year when Mrs. Evans says she saw all the instruments at Dan's shop. Says

that she saw either D or E; is not sure which (p. 50); does not remember whether any one talked through the machines or not (p. 53); says that she has never been at Dan's shop since (p. 51); saw a couple of large clocks (p. 52). Her story is that she was affected enough by what she saw to speak of talking machines when she got home, but not enough to listen to them, or even to know whether any one listened to them, while she was there.

No. 134. *David Evans*, defts, iii, 52. — Brother of Andrew, lived at his father's in the fall of 1875; remembers the fact of the visit, and that the girls on their return said that they had seen a talking machine and an electric clock (p. 54).

No. 135. *Sarah E. Evans*, defts, iii, 55. — Says that she was with Andrew and Margaret on this visit; also visited Jacob in September, 1878, with Margaret Jane, now Mrs. Erb (p. 56). At the 1875 visit saw A and D and C; thinks she saw B, C, F, I, but is not positive about the latter (p. 57). Says that she has not been at Dan's shop at any other time (p. 58). Drawbaugh called them telephones (p. 58). Saw clocks — one big one — in one of the rooms. She does not say how many there were (pp. 58 and 60). Jacob listened at the telephone (pp. 58–9). Description of the rooms (p. 59). Emanuel Ditlow was at Jacob's, but I do not know where he lived. Got home late Sunday evening; were left at the end of the lane; the weather was cloudy, but nothing falling (p. 86–7).

No. 136. *Mrs. Mary A. Evans*, defts, iii, 61. — Wife of Jacob Evans. In the fall of 1875 Andrew, Sarah and Jane came to visit us, and we went to the shop; we saw the talking machine; Dan talked and my husband listened; what we saw was "telephones and clocks and telegraph and different other things." Saw A, D, B; "I have seen them all, of course, but don't remember the others at that time" (p. 63); it was in 1878 that I saw them all (p. 73); description of the rooms (p. 64). Heard of the talking machine in 1872 (p 67); story of her revived recollection and her visits to Milltown and the Drawbaugh family, pp. 67–70, 72, 73.

No. 138. *Elizabeth Evans*, defts, iii, 75.—Sister-in-law of Moses Evans; lived with him in the fall of 1875. Remembers the fact of

a visit; on their return the girls said they had seen a talking machine, and that Jacob Evans, his wife and Emanuel Ditlow and the two girls were present. In answer to a leading question she assents to a statement of counsel that they said that Andrew also was present. The others say that Emanuel was not.

No. 139. *Moses Evans*, defts, iii, 78. — Father; remembers the fact of the visit; the girls on their return said they had seen talking machines; Andrew did not bring the girls to the house, but left them at the gate or at the road at the end of the lane; it was about dark or a little after dark.

No. 140. *Mrs. Almira Rentzel*, defts, iii, 83. — Another sister of Jacob Evans; did not live at home in 1875; lived near by. A few days after the alleged visit the girls told her they had been to Dan's shop and seen a talking machine and several clocks; she visited Jacob in February, 1876, and Jacob said that Drawbaugh had a talking machine; she was at Jacob's again with Mrs. Erb in March, 1879 (p. 85). She is quite sure that they said they had seen a talking machine and several clocks (p. 86).

No. 141. *Jacob Evans*, defts, iii, 88. — Says that he remembers the visit; that Drawbaugh explained the clocks and talked with his telephone. In answer to leading questions he then says Drawbaugh called it at that time a talking machine, and not a telephone; he thinks he listened, but he is not sure whether he did or not (p. 90). Description of room (p. 90). His memory is very vague about the talking machine. Does not attempt to identify any. Emanuel Ditlow lived at his house during the whole winter of 1875–6.

No. 204. *John Simmons*, defts, iii, 427. — The defendants afterwards called this witness, who had been for several years in the employ of Drawbaugh and Chellis (pp. 431, 432) and had heard this suit much talked about and discussed. He was one of those whom Mrs. Evans visited at Milltown in 1881. It is difficult to believe that if this man had been prepared in 1881 to tell the story which he now tells, the defendants would not have known of it and called him, inasmuch as he lived in the village of Milltown, was working for Drawbaugh, and testifies that this suit was the subject of continual talk.

Simmons testifies in substance as follows: Farmer; lived in Cumberland County since 1875. In that year, about November, after corn husking, was at Drawbaugh's shop with Jake Evans. Drawbaugh talked through his machine to me, and I think I understood the words he spoke; Jake Evans listened also. Recognize A and E and may have seen the others; heard of Drawbaugh's talking machine as much as a year before that. Have heard this suit talked of in Milltown five or six years ago. [The controversy is only three and a half years old.] Drawbaugh never spoke to me about it. Don't remember mentioning this visit to anybody before to-day. Heard about this suit, but do not know that I heard a great deal of talk about it. I heard of it in Milltown, and elsewhere. Cannot remember anybody who spoke about it. Dan spoke of it to me in the store, and in his shop where I worked for Chellis. Worked there three or four years; outside work, chiefly. In 1880, 1881, 1882; never heard Chellis say anything about the suit, but heard Dan talking about it. He never asked me if I knew anything about the machine, and I never mentioned to him or any one connected with him this visit to the shop with Jacob Evans. I spoke to Shank about it about two weeks ago; he met me and asked me whether I knew anything about talking machines, and I told him. I lived at Eberly's Mills from 1876 to 1883. Lived in the village. I saw these talking machines in the right-hand room upstairs as you go in from the outside steps; saw clocks standing around; don't recollect what kind; some I think, were in wooden cases, and some little ones; had heard of his clocks before that, but do not remember what I had heard; cannot say how many clocks I saw, but there were some there. Last winter I was in Drawbaugh's shop every week. When we listened at the machines, Jake and I were sitting at the stove; the talking machines were on a kind of shelf; one of them was fastened to a kind of stick or something; he took them down and got to talking to us about them; then he went into the room and began talking through them. It was one like E, which was fastened to a kind of a stick. Evans and I were standing or sitting together by the stove listening; I do not know how far it was from the bench; Drawbaugh went right across

through the door to another room separated off by a partition; there was nothing but a single wooden partition between him and us. Jake Evans and I had heard them talking about this machine, and we thought we would go down there and see it. When I saw Shank I did not tell him of the visit of myself and Evans to Drawbaugh's shop; I did not tell that to anybody until I told it to Mr. Jacobs this morning. Comfort came to see me last spring and I told him I knowed nothing about the telephone. I now wish to state that it was four years ago that I first heard of this suit.

Witness's testimony seems to imply that the instruments were on the bench while he was by the stove listening, but it is not precisely definite on that. If so he could not have heard.

This deposition is an assertion that Jacob Evans heard talk through these very machines three weeks before the alleged visit with his wife, sisters and brother; that he did not speak of it to them, for none of them mention it; that when he and they went there soon afterwards the machine was connected up for the benefit of him, the only one who had heard, and none of the others were asked to try it or wanted to.

Jacob Evans did not mention this alleged occurrence in his deposition; six months later he was recalled to state what he knew, and did not mention it; it is certain that he neither remembers it nor believes it; nor does Drawbaugh, for Drawbaugh had an interview with Evans about this case in June, 1881; he was present during the cross-examination of Evans and our other witnesses; if he had had the slightest recollection of any exhibition to Evans he would have brought it to Evans's mind, or at least would have had it mentioned in some cross-interrogatory; but he did not. Simmons has lived alongside of Drawbaugh during all this controversy; has been employed in his shop during a part of the time; has talked with him about the suit; this alleged visit was never mentioned until the day he testified. It is certain that Drawbaugh has no recollection of it, — and that the witness has not. The details of his story are contrary to the defendants' other witnesses. He has simply made up a clumsy lie. Such a condition of things not only destroys the value of the Evans family and of Simmons, but makes it impossible to place faith in any of the proofs of which these are samples.

Certain specific facts testified to by the Evans witnesses show that their visit was in 1878 and not in 1875.

Number of Clocks seen. It has appeared from the testimony, collected elsewhere in this brief, that in the fall of 1875 there was only one electric clock at Drawbaugh's, and that it was in a case which was roughly made, probably of pine. In 1878 there were several handsome clocks there. The Evans witnesses who refer to the matter speak of clocks in the plural and some of them specifically state that there were several.

Andrew says (defts, iii, 31) : —

"*X A.* 307. There may have been one or two clocks in the same room I saw the talking machine in, but I can't remember."

"*X Q.* 309. What kind of a departm ent or room was that where the other clocks were that were not in the room with the talking machine?

"*A.* It was a smaller department.

"*X Q.* 310. What did he tell you about the clocks?

"*A.* He told us they were electric clocks."

"*X Q.* 339. Whereabouts in that room were the clocks — standing on a bench, or how?

"*A.* I don't remember."

"*X Q.* 340. Were they going?

"*A.* Yes, sir; some of them."

"*X Q.* 343. Did you see one clock or several in there?

"*A.* I seen several clocks.

"X *Q.* 344. How big were they, — what sort of looking things were they?

"*A.* Some of them had face and hands on the same as any other clock, and some had frames on them and some had not."

"X *Q.* 358. Were the frames light colored frames or dark colored frames?

"*A.* As near as I can tell they were part dark and part light."

Mrs. Erb says (p. 51) : —

"X *Q.* 48. What else did you see at Mr. Drawbaugh's shop besides the instruments which you have specified among those now on the table?

"*A.* I saw a couple of large clocks.

"*X Q.* 49. What part of the shop were they in?

"*A.* I don't remember.

"*X Q.* 50. What else did you see there?

"*A.* I don't remember of anything else."

Mrs. Rentzell (p. 86) : —

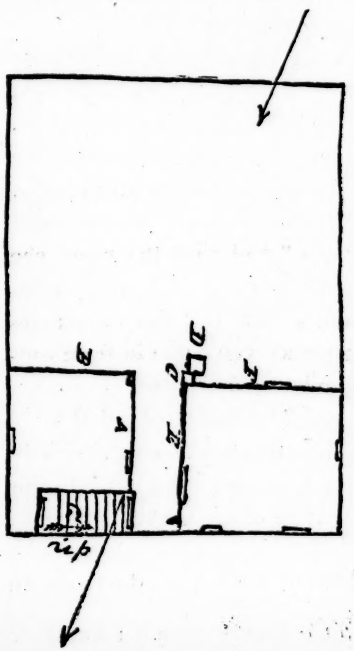
"X *Q.* 29. You have stated some things which you say your sis-

ters told you soon after their return from Jacob's: will you tell me what else they said about that visit to Milltown?

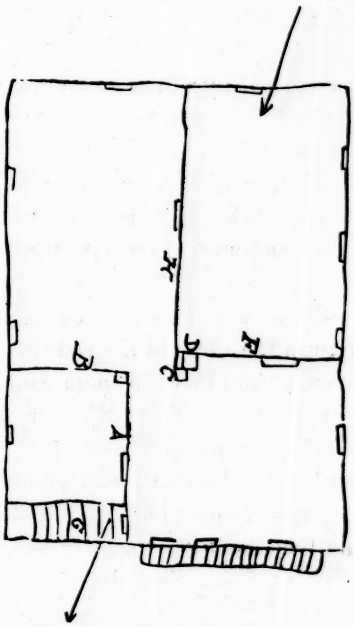
"*A.* They told me that they had seen this talking machine that Mr. Drawbaugh could talk across the ocean with, and several clocks."

The Arrangement of the Rooms.

The following diagrams, taken from Drawbaugh's deposition, with dates fixed by other witnesses, show the arrangement of the rooms at the periods named under each. The arrangement of the time of the Clock Company was not made until April, 1878. The other arrangement, at the time of the Axle Company, was made in the early part of 1875. The diagram of the arrangement of the Clock Company period is not exactly right. What are shown in the drawing as two corner rooms come closer together, so as to substantially and apparently divide the whole floor into four rooms.



Time of Axle Company, spring of 1875 to spring of 1878.



Time of Clock Company, spring of 1878, and subsequently.

There were the same outside steps at both periods, the lower end next the corner of the building, and ending at an outside landing opposite the passageway shown in the Axle Company plan.

Andrew Evans's memory appears to be very vague, except that he has a general disposition to say yes to long questions. He says, however, explicitly (p. 31): —

"*Q. Q.* 372. When you entered the building through the door, did the outside door open into one of these small rooms, or into a passage, or how, so far as you recollect?

"[*Same objections.*]

"*A.* Into one of the small rooms."

That distinctly excludes the entry way or passage, which is the most prominent thing in the arrangement of the Axle Company period, and shows that they entered from the outside directly into one of the rooms. His answers to other questions about the rooms fit one arrangement about as badly as they do the other.

Mrs. Erb says nothing on the subject.

Andrew Evans had said that he saw a talking machine, and he only saw the receiver in the first room "as you came in," which he had specified as being the one that you entered *directly from the outside.* That would be, in the arrangement of the Clock Company period, the room in the northwest corner. Sarah Elizabeth Evans testified (p. 59), that being in that room where the receiver was, she and her sister Jane "just walked out into the other room," and that the room she went into was not the room in the left-hand corner, but "on the right-hand side as you came into the big room," but that the telephones were in the room in the right-hand corner as you came in from outdoors. And that the room which she and her sister went into when they went away from the telephones was "I think on the left-hand side." She seems to have distinguished between the left-hand side and left-hand corner, which would make the room she went into the larger back room on the left side at the time of the Clock Company, and then she says (p. 60): —

"*X Q.* 53. What did you see in that other room, — the room on the left-hand side?

"*A.* I think that is the room the clocks were in, but I can't say for sure any more."

The Clock Company did keep clocks there.

Mrs. Evans testified (p. 64) that they went up a flight of steps outside of the building and went first into a small room on the right hand; going up the steps outside, one did in fact enter the main door from the outside landing into the building by turning to the right. In the time of the Clock Company the visitor would do as she says, enter into a small room; in the time of the Axle Company you would have entered into a passageway. She says the listening was done in the small room at the right-hand side, and that Drawbaugh was talking in the small room on the left-hand side.

Jacob Evans testified that the receiver was in one room and the transmitter in another, and then he says (p. 90): —

"*Q.* 20. What is your recollection as to the room in which you listened at the talking machine, and the room which he went into to talk through the talking machine, where these rooms were situated?

"*A.* They were both on the left-hand side of the shop, as you come in. There was a sort of hall on the right hand, and these rooms were on the left-hand or east side of the shop. The one that Dan was in was the north room, at the left-hand side, and I was in the one towards the south.

"*Q.* 21. Was the room that you were in the large room?

"*A.* Not very large."

That clearly shows that the room he was in was in the southeast corner, and such a room, not very large, did exist at the time of the Clock Company, but did not exist at the time of the Axle Company. Then the defendants' counsel put another question to him (p. 90): —

"*Q.* 22. Some of the other witnesses who have testified on the subject have testified that there was a room on the right-hand side as you went in, and that you listened at the talking machine in that room on the right-hand side; I desire to call your attention to their testimony on that point, and ask you whether it refreshes your recollection as to the facts, or not?

"[*Objected to as leading and peculiarly improper under the circumstances.*]

"*A.* I think they have reference to the room I was speaking of — the south room."

He persists, therefore, in his statement. The Court will observe that the outside steps existed at both of these periods.

At the time of the Evans visit Drawbaugh called his apparatus a "telephone" and not a "talking machine."

The defendants' counsel generally put the phrase "talking machine" into his questions, but where the witness had not heard either word just mentioned in the deposition, he or she generally used the word "telephone." Thus Sarah Elizabeth Evans said (p. 57): —

"*Q.* 27. What did you see there at Mr. Drawbaugh's shop at that time?
"*A.* Telephones."

Mrs. Mary Evans said (p. 63): —

"*Q.* 30. Did you see anything in Mr. Drawbaugh's shop at that time; if so, what?
"*A.* Yes, sir; we seen the telephone, the clocks, and the telegraph, and different other things."

This is not mere accident, for Sarah Elizabeth Evans, who had herself used the word "telephone," and not the words "talking machine," was asked on cross-examination (p. 78): —

"*X Q.* 35. You said that you saw telephones there: did Mr. Drawbaugh call them telephones?
"*A.* Yes, sir; he did."

The defendants perceived the importance of this, and, after this testimony from two women, Jacob Evans went on the stand, and the following took place (p. 89): —

"*Q.* 16. Tell us what took place there in the machine shop while you were there that day with your brother, your wife and your two sisters.
"*A.* We got in conversation with Daniel Drawbaugh, and he was explaining his inventions he had there, — his clocks — and talking through his telephone."

That was the witness's natural expression. The defendants led him out of it in a way which plainly indicated that he had been talked with about the word he was to use.

"*Q.* 17. Do you remember whether he called it telephone or talking machine that day?
"*A.* Talking machine."

The importance of this, and particularly the positive testimony of the witness, Sarah Evans, that Drawbaugh had a talking machine, lies in the fact that the defendants had previously proved expressly that the instruments were called "talking machines" up to the summer of 1876, and called "telephones" after that. Thus W. S. Dellinger says (defts, i, 464): —

"*X Q.* 60. I notice that you used the word 'telephone' in speaking of what Drawbaugh did; did you and Mr. Drawbaugh use that word during the years that you were there while talking about his instruments?

"*A.* In the beginning we used the word 'talking machine,' afterwards, 'telephone.'"

Dellinger did not move there until the spring of 1876.

Shank said (defts, i, 30): —

"*A.* 88. Well, he was working at this here telephone, or what you might call it, speaking machine as he called it."

John J. Zacharias said, that when the defendants' counsel visited him to ask him to testify in this case, the following took place (defts, i, 58): —

"*A.* 93. They asked me whether I knew anything of Drawbaugh's telephone; I told them I didn't, but that he had a talking machine, — that he called a talking machine."

Ezekiel Worley (p. 266), ans. 17, "His telephone — talking machine, as he called it at that time."

A. Hamacher (p. 304, ans. 21), "He used the word 'speaking machine.'" Ans. 73, "He said that the telephone (speaking machine, he called it at that time)," etc.

Sarah Evans said that she saw Jacob's brother Emanuel at Jacob's house that day, but did not know where he lived (x-ans. 65–6, p. 86). Jacob testified that Emanuel lived at his house all that winter (ans. 32, p. 92). Sarah could not have passed twenty-four hours there, seen Emanuel, mentioned him when she got home (Mrs. Elizabeth Evans, p. 77), and not known where he lived, if he lived in the house. Her visit must have been during some winter when he did not live there.

There is more evidence, however, about the Evans family. We proved in our rejoinder that during the last week of June, 1883, that is, after Jacob Evans had testified in Philadelphia for the complainants, but before he testified for the respondents, Mr. Comfort, our employé, when driving near Evans's place in York County, met both Evans and his wife in the road in front of their next-door neighbor's; that Evans then stated that he was still of the same mind about it as when he testified for the complainants at Philadelphia; that he never saw or knew of a talking machine at Milltown and did not believe Drawbaugh had one. An objection taken by the defendants intimates that this was inconsistent with what Evans had testified to in Philadelphia, because he had there said that he had heard that Drawbaugh had a telephone in 1877, a year or two after Mr. Bell's became known.

Upon a nice verbal construction, of course, this statement would have been in part untrue and inconsistent, because the witness did not leave Milltown until some time after this controversy began, and Drawbaugh did have talking machines there then, but what he obviously meant was that during the time that was important and was referred to in his deposition for the complainants, he did not know of any machine there, adhering to what he had testified to in Philadelphia. That he made this statement is of importance; either it shows that as late as June, 1883, he still believed and his wife still believed that they had never heard of any talking machine or seen any at any time material to the case, or else they felt that they was about to do a dirty piece of business, and were ashamed to have it known, and so lied on the subject to Mr. Comfort the moment occasion offered. To prove the fact of this talk with Mr. Comfort we called the three persons who were present: *John M. Fisher* (complts, iii, 2100), the neighbor at whose house the talk took place; *George Ditlow* (complts, iii, 2122), cousin of Mrs. Jacob Evans, and brother of several of the other Ditlows who testified; and *Elias F. Garman* (complts, iii, 2434), a neighbor of Ditlow, and who was there with him at that time. They all testified clearly and positively to the declarations as we have stated them, and stood long cross-examinations about them. The testimony of George Ditlow and Elias F. Garman was particularly strong in this, that the

conversation which took place, and which they testified about, was in the last week of June, 1883; about Nov. 1, 1883, Evans came back and testified for the defendants that he had seen talking machines and talked through them; Garman and Ditlow were together one day about that time and heard that Evans had been to Harrisburg and so testified, and they expressed to each other their surprise that he could have done such a thing after what they had heard him say to Mr. Comfort four months before. It was not until some months after this that anybody on behalf of the complainants first visited them. This was first brought out on cross-examination (see Ditlow x-100, p. 2134; Garman, ans. 9, p. 2335).

The defendants in their surrejoinder undertook to attack their testimony. It appears that a lad at school, named Robert A. Ross, nineteen years old, was in a sense with the party. He had been climbing up a mulberry-tree to get mulberries, and both Ditlow and Garman said that they thought he was not at hearing distance. Fisher did not mention him as a person present. Ross, being called by the defendants (defts, iv, 231), says that he had been up the mulberry tree, but had got down; that he heard talk between Comfort and Evans and heard something talked about the talking machine, but, as the defendants want the Court to infer from the deposition, did not hear what Fisher, Garman and Ditlow had testified to. His testimony, however, does not amount to this, and we call the attention of the Court to the manner in which he was examined. He was asked, not whether Evans did not say *substantially* what the witnesses repeated, but whether Evans used the *words* reported by the witnesses. His testimony was as follows (defts, iv, surrej, 232): —

"*Q.* 6. Mr. Fisher has testified that, while Mr. Comfort was there, he spoke to Jacob Evans, and said, 'Well, Jacob, what is your opinion on the talking machine to-day?' And that Mr. Evans replied, 'About the same; I never saw it, and don't believe there was one.' Mr. Ditlow and Mr. Garman have testified to substantially the same thing; will you please state whether those words were or were not said between Mr. Comfort and Mr. Evans while you were there that day?

"[*Objected to as leading, and as an improper manner of interrogating the witness.*]

"*A.* No, sir; they were not."

Then they asked him what did take place between Comfort and Evans, and he stated:—

"*Q.* 7. Do you remember what Mr. Comfort did ask Mr. Evans? If so, please state, and state Mr. Evans's reply.
"*A.* Yes, sir; Comfort asked Jake whether Jacobs and Drawbaugh had been down lately. He said they had been down lately.
"*Q.* 8. What did Mr. Comfort then ask him, and what did Mr. Evans reply?
"*A.* Comfort asked him whether they had much to say about it; Mr. Evans said they hadn't much to say about it."

So far he is undoubtedly right; that did take place according to the story of our witnesses. The remarks we wished to prove came after that, and here Ross ceases to be a witness for anybody.

"*Q.* 9. What next passed between Comfort and Evans?
"*A.* I don't remember."

This is much more interesting because the deposition of Jacob Evans, called in surrejoinder to rebut Garman, Ditlow and Fisher, had been of the same character. They did not ask Jacob Evans whether he said in substance that he was of the same mind as when he testified, and his denial was only of *language*. His testimony is as follows (defts, iv, surrej. 164).

The testimony of Fisher, Ditlow and Garman was stated to him and he was asked whether he remembered the occasion. He answered:—

"*A.* 2. Yes, sir; I remember the time, and no such language was used in regard to that question of the telephone."

Then he was asked to state what the conversation was, and he states the first part of what our witnesses speak of, and adds:—

"Then, *so far as I remember*, the subject was changed off to other conversation."

Thus he does not pretend to any clear recollection, and if his answer is to be taken as exhaustive it means that no reference whatever was made to his testimony. That is not likely, and the testimony of our three witnesses is clear upon that. The three could not have made that up out of whole cloth.

It is very true that upon cross-examination they got our witnesses to swear that they reported to the best of their recollection the precise words that were used, but a mere difference of recollection as to the precise words would have permitted Evans, without fear of absolute perjury, to have testified as he did. Now such testimony from two men is altogether too weak to overcome the testimony of the three, Garman, Fisher and Ditlow; more especially as the defendants do not recall their former witness, Mrs. Jacob Evans, to contradict our witnesses.

The defendants ventured, however, on another assault. They called several witnesses — Long, Baughmam, Bittorf, Himmelrich and Prowell — to attack Garman's character, and it turned out that all of them except Prowell had had personal quarrels with Garman about money matters, and their difficulties seemed to be that they thought Garman had promised to pay them under certain circumstances, and did not keep his promise, and therefore, that he was an untrustworthy man; and they could not, any of them, name a single case where any one else had ever doubted Garman's word. Against objection, Long (defts, iv, surrej.) stated this: that Garman had promised to pay him when he completed a certain contract with one Musser, and got a settlement under it; and that when he asked Garman to pay his bill he said he would when he got a settlement with Musser, but that the matter was not completed. Long says that a man whom he says was the clerk of Musser, told him that the matter was settled and that there was some money due Garman at Musser's office; that was all the foundation he had for saying that Garman was not to be believed under oath. Baugham (defts, iv, 243) says, that Garman's reputation for truth and veracity was bad and that he would not believe him under oath; but that he had had business dealings with Garman and considered that Garman owed him money. Bittorf (defts, iv, 244) was in the same condition and declined to go into any details or make any statement as to what his particular grievances with Garman were, but he had some. Hemmelrich testified (defts, iv, 245): —

"*A.* Well, I've known him for the last eight years, I guess; he lived about two years next me, and moved away about six years ago — about eight years, I think.

"*Q.* 2. Are you acquainted with the general reputation of the said Elias F. Garman for truth and veracity in the vicinity in which he lives?

"[*Objected to, no proper foundation having as yet been laid for the question.*]

"*A.* I don't know about it now, for he's moved away from me, but I can tell what it was when he lived next me.

"*Q.* 3. Please tell us what it was when he lived next you.

"[*Objected to on the same grounds, and furthermore as incompetent, for the reason, among others, that the question refers to a period too remote.*]

"*A.* Well, that was his reputation there among the neighbors — that Elias Garman wasn't to be believed, that he spun pretty long yarns, and told what wasn't so."

But the best of all was Prowell, the last man they put on. He testified (defts, iv, 247): —

"*A.* I know him, and have known him for three or four years, at least.

"*Q.* 2. Are you acquainted with the general reputation of the said Elias F. Garman for truth and veracity in the community in which he lives?

"*A.* Yes, sir.

"*Q.* 3. Is it good or bad?

"*A.* It is a little hard to answer that.

"*Q.* 4. How would you answer it?

"[*Objected to in view of the last answer.*]

"*A.* I would trust him, but I have heard men say that they wouldn't trust him."

Then they called no more.

The Ditlow Witnesses.

It appears from the testimony (defts, iii, surbtl, 882–3) that two families of this name — each quite numerous — lived for many years, including a number of those material in this case, close by the Etter & Shanklin bridge, less than half a mile from Milltown. The fathers of the families were three brothers: David Ditlow, who married the widow of a brother who had left children, was the head of one family; Abraham Ditlow was the father of the other family. The following members of the David Ditlow family have figured as witnesses in this case: three sons, David M., Alfred, George, and a daughter, Annie, now Mrs. McCleaf, and her husband Robert Mc-

Cleaf. This family is connected by marriage with Drawbaugh, one of the brothers, Alfred (defts, iii, 883), having married a daughter of John B. Drawbaugh, Daniel's brother (sworn to by Annie McCleaf, x 23 defts, iii, 447, and Abr. Ditlow, *ib.* 883).

Of all the members of a family thus so long neighbors of and so intimately connected with the Drawbaughs, only two have been called to testify to knowledge of the alleged talking machine. *David M. Ditlow* only saw a machine consisting of tin tubes at each end, connected by wire wrapped with string (defts, i, 597). This was too much like a string telephone, and Drawbaugh was required to testify with reference to Ditlow's deposition that he never had such a machine (p. 187, *supra*). *George Ditlow* (complts, iii, 2124) testified positively that he never heard of any talking machine. *Alfred Ditlow* (defts, iii, p. 820), *John B. Drawbaugh's son-in-law*, and who tells us that he has known Daniel Drawbaugh for fifteen or twenty years, does not pretend to have either seen or heard of the talking machine, but simply testifies to an alleged attempt of Drawbaugh's to borrow money "for a patent," what the patent was to be for not appearing (p. *infra*).

Mrs. Annie McCleaf (defts, iii, 445), who lived with her father's family near the Etter & Shanklin bridge for eighteen years, up to 1875, was not asked about the talking machine, but simply testified about the flood of 1873 and the carrying away of a small part of the Etter & Shanklin bridge. The father of this family, *David Ditlow*, is still living (defts, iii, 447). In 1868 he lent Drawbaugh $400. Drawbaugh has been to see him about this case, but did not call him (defts, iii, 879). That but one member of this family of five could be found to testify to any knowledge either by sight or by hearsay about the talking machine, and that in such a way that Drawbaugh had to deny what he said, while another testifies positively that he never heard of it, is proof enough that no such thing was publicly known.

No. 270. *Alfred Ditlow*, defts, iii, surbtl, 820. — This is one of the David Ditlow family; he was brought up within a quarter of a mile of Milltown and lived there much of his life, and is the son-in-law of John B. Drawbaugh (deps. of Annie McCleaf and Abr. Dit-

low, defts, iii, 447, 883). He had every opportunity of knowing of Drawbaugh's alleged talking machine, if there was anything of the kind. Is not asked a single question about it, and considering how far afield the defendants have gone to bring witnesses who merely heard rumors of it, it must be taken that this witness had never heard of it at all at any early period. His testimony is as follows: Drawbaugh once asked him to lend him a small sum of money for a patent; he does not pretend that it was a patent for the talking machine or anything of the kind; he did not lend him the money. Witness worked for George W. Mumper several years; which appear by Mumper's books to have been 1875 and 1876, and apparently in the last half of 1876 he worked painting Mumper's barns, corn husking, etc. Witness testifies that during that year, while quarrying stone for Mumper, Drawbaugh came into the field and called Mumper aside; then Mumper came up and I asked him what Drawbaugh wanted; he said he wanted to borrow some money; Mumper told him he had no money to spare. This was after he tried to borrow it from me; I told him to go to Mumper, I thought he could get it there.

It is clear from the testimony of this witness — important for the complainants — that Mumper was a man people were likely to go to borrow money from, and that his only reason for not lending it to Drawbaugh at the time was that he hadn't it to spare just then; there is not a pretence that this money was asked for either from Ditlow or Mumper for anything connected with a talking machine.

No. 269. *Robert McCleaf*, defts, iii, surbtl, 815.—Age, twenty-seven years. In 1873 I lived in my father's family, near Milltown. Was away from my father's from April 14, 1873, until December, 1873, and was at home until the store blew up in 1874. Defendants' counsel states to the witness that the store blew up Jan. 19, 1875; witness says, I went to New Cumberland next morning; after that stayed around there until June, 1875, working for Zacharias & Co. While living in the neighborhood of Milltown was in Drawbaugh's shop, but do not recollect being there more than once; never went there afterwards; have never been there since the store blew up. My father, who is not living, and I went down to make cider;

we made it in the basement; we went upstairs and saw Drawbaugh; he invited my father to go upstairs, and said, "I will show you a talking machine"; went up together into a little room and Dan brought out his talking machine; put it on the workbench; had a wire fixed attached to it which went into the adjoining room; told my father to listen while he went to talk through that machine in the wire; father listened and said he heard very plainly; I think A is the one which my father listened at. I am the husband of Mrs. A. McCleaf (sister of David M. and Alfred Ditlow), who lately testified about the Etter & Shanklin bridge. On cross-examination the witness was somewhat mixed up as to his dates.

With the receiver in one room, and the transmitter in another, separated by a single board partition, only the most practised persons, and with the very best telephones, can hear through the instrument, because the direct sound is very much the loudest, extinguishing that of most telephones. Even if the date and incident were as stated, this testimony, therefore, would show the credulity of the witness rather than the fact sought to be proved. Such a test, appearing in the deposition of an expert, would be condemned.

No. 206. *Mrs. Annie McCleaf*, defts, iii, surbtl, 445. — She only testified about a flood; was not asked about telephones.

Of the *Abraham Ditlow family*, the sons, Joseph, Abraham and Emanuel Ditlow, and the daughter, Mary A., wife of Jacob Evans, have appeared as witnesses.

No. 233. *Joseph Ditlow*, defts, iii, 521. — Originally called by complainants (complts, ii, 958); then testified that he first heard of the talking machine from George Drawbaugh, in the Milltown store, in the winter of 1876–7, during the latter part of a visit of the witness to his home that winter from the West, where he had been living; that it struck him as something new; never had heard of it before in his life, and that when he went back to the West in the spring of 1877 he told of it to the "Hardesty" family, with whom he was living there. He was at Drawbaugh's shop and in the village often enough during the ten years before that to make him a witness of value. He is recalled by defendants in surrebuttal (defts, iii, 521) to testify to a change, not of recollection, but of belief,

as to the time when he first heard of the talking machine, and mentioned it to the Hardesty family and others, and the way is paved for him by calling Mr. and Mrs. Harmon Hardesty, and their son and daughter, Hamlin and Saloma, and one Sydney S. Reed, to say that Joseph Ditlow mentioned the talking machine to them long before Joseph had said he first heard of it.

No. 214. *Sydney S. Reed*, defts, iii, surbtl, 476, 508. — Union Township, Porter County, Ind.; railroad station agent. Became acquainted with Joseph Ditlow in 1870 at Wheeler, Ind. Ditlow came there May 17, 1870, and boarded at witness's house about six weeks. Heard Ditlow say that a man named Drawbaugh, who lived near him, was getting up a talking machine; never heard of Drawbaugh at any other time. The way he came to tell this, witness was asking him where he was from, and about himself; asked him what kind of a machine it was; he went on to explain it, but witness does not remember what he said; did not say he had talked through it, but said he had seen it; mentioned a couple of glass tumblers attached to it by wires in some way; does not recollect how he did explain it exactly.

Reed's testimony must be considered in the light of Joseph Ditlow's own depositions. In that for the complainants he states that his first knowledge of the talking machine was derived from George Drawbaugh in the store at Milltown, and this statement he in terms reaffirms in his deposition for defendants (ans. 2, p. 521), but says he is now "satisfied" that it was before 1877. George Drawbaugh's express testimony is, that he had no knowledge of the talking machine before he painted Sadler's wagon, which he says was in 1870 or 1871 (defts, i, 623-4), but which is shown by other testimony in the case to have been in 1871 (see p. 200, *supra*, and p. 607, *infra*). Taking only what we find in the defendants' record, it is clear that the story which the defendants imported Reed to tell is untrue. What Ditlow first learned from George Drawbaugh and George Drawbaugh did not know until 1871, Ditlow did not tell to Reed in 1870. Moreover, Reed says that Ditlow told him he had seen it; Ditlow has no recollection of ever seeing it or of ever telling Reed about it.

Ditlow testified for the complainants (complts, ii, 961) that he first heard of it in 1877; he has lived in the same town with Reed ever since then and they have known each other well. Reed is certainly mistaken in the date; it could not have been before 1872, and, once mistaken, one cannot tell where the mistake ends. Reed says that they have never spoken of it since; it is not likely that the notice which the speaking telephone attracted in 1876–7–8 would have failed to make them remark to each other that to them it was an old story, if they had talked of it six years earlier.

Reed was further used to give a certificate of good character to the Hardesty family and the Ditlow brothers (p. 482), and to testify that the freight receipt book at the Wheeler station shows two items of receipts of freight addressed to Joseph Ditlow at Wheeler from some point east of Pittsburgh, one entry being dated Sept. 25, 1874, the other dated March 30, 1877. The point of this is made apparent by the testimony of the Hardesty family.

No. 215, *Isabel Hardesty* (defts, iii, 483), her daughter, No. 216, *Saloma Hardesty* (defts, iii, 489), her husband, No. 217, *Harmon Hardesty* (defts, iii, 493), and son, No. 218, *Hamlin Hardesty* (defts, iii, 509), testify substantially to one and the same story, which is that they became acquainted with Joseph Ditlow in the spring of 1874, when he came to work for Mr. Hardesty; that he worked there five years; that in the fall of 1874 he went trapping; that while waiting for his "trapping kit" to come from Pennsylvania by railroad on that occasion, or when the kit had come and was being unpacked (the testimony of the different members of the family not being quite in harmony on that point), he spoke of Drawbaugh; said he wanted the stove belonging to that particular kit, because Drawbaugh made it for him; that Drawbaugh was an ingenious man who had been making a talking machine; said he had a talking machine to talk through the house.

The fact appears from their testimony that after Joseph had used the kit that winter, it remained at the Hardesty place some time, and was then reshipped to the East, and then came back a second time to the West, and to the Hardesty place, in the spring of 1877 (pp. 485, 491, 496, 512).

If it was on this second occasion of the coming out of the kit — in the spring of 1877 — that Joseph Ditlow mentioned the talking machine to the Hardesty family, it would be perfectly consistent with Joseph Ditlow's testimony for complainants, and there is no reason apparent on the record why it was not on this second occasion instead of the first, as the Hardestys now insist.

When Ditlow testified for the complainants he said on cross-examination (complts, ii, 966) that he told the Hardestys of the talking machine soon after he went out in the spring of 1877; he has not changed his own recollection about it. The kit went West at that time; the railroad books show it.

The testimony of the Hardestys as to the time is a matter of bare recollection or impression; and it appears that that recollection or impression has not always been what it is now.

Mr. and Mrs. Hardesty were questioned by *defendants'* counsel as to a visit made to them by Mr. Tompkins on behalf of complainants in May, 1883, and Mrs. Hardesty testifies (p. 487) that she told Tompkins that Ditlow mentioned the talking machine to them, when his box first came out; didn't know whether it was 1877 or 1874 or 1875 or 1876, — "whatever time it was when Joe's box came the first time." Mr. Hardesty testifies in direct examination that Tompkins took him to Philadelphia, where complainants were at that time about closing their proofs; that he there saw Mr. Storrow, who questioned him, and that he signed a paper written by Mr. Storrow; that this statement made the trapping kit arrive in 1877; that Tompkins said that was the time, and witness, not knowing any better at the time, signed the paper so stating (pp. 497, 498), but told Tompkins afterwards that he did not think he was right, and that Tompkins said, "If I [witness] found anything, I should send him word." Witness does not pretend that he ever did send any word, or sought to change his written statement given to Mr. Storrow, of which he remembered only that it gave 1877 as the date of Joseph Ditlow's first mention of the talking machine.

Mr. Hardesty further testifies that he first saw Mr. Tompkins in April, 1883 (p. 502), about three hours before they started to Philadelphia.

Complainants' counsel do not admire the practice of obtaining pri-

vate and *ex parte* written statements from expected witnesses, and then trying to use them as evidence, and have not used such papers except where the defendants have first introduced the subject by calling on their witness to state what passed at interviews with counsel or agent, or to state the contents of such paper. This was such a case. Hardesty admits that the words "read by me before signing," and the signature are written by him. The paper is as follows (defts, iii, 502) : —

"I, Harmon Hardesty, state as follows:

"I know Joseph Ditlow. He worked for me in 1873, 1874, 1875, 1876, 1877. He went East at various times for the winter. He went East in the fall of 1876, and came back to me in the spring of 1877. In that spring of 1877 he spoke to me about a machine he had seen at home which Drawbaugh had, to talk through. This was the first time he spoke of a talking machine that I know of.

"In January of this year, 1883, Joseph Ditlow and W. C. Tompkins came to my house and store at Hamlet, Stark County, Ind. They asked us — my wife, my son Hamlin and I — when it was that Joe first told us about Drawbaugh's talking machine. We — that is, my wife, my son and I — talked it over and then we all said that it was in the spring of 1877.

"HARMON HARDESTY.

"Read by me before signing."

Mrs. Hardesty has nothing to say in her testimony about this January visit; she either ignored or had forgotten it.

Mr. Hardesty got into trouble about it. His direct examination on the first day implied (p. 497) that no one talked with him before he went to Philadelphia in April or May. On cross-examination, on the second day (p. 502), he said that he first saw Mr. Tompkins in April. This written statement that he saw Mr. Tompkins there in January was then shown him and he said that he remembered the earlier visit. Then he said he had remembered it on the night of the first day. As it was in his cross-examination on the second day that he swore that the first time he saw Mr. Tompkins was in April, 1873, at the time he was taken to Philadelphia, defendants' counsel thought it necessary to have the witness explain his little discrepancy, which he did by asserting that the January visit, which had escaped his memory while he was on the stand the first day, but

came back to his mind on the evening of that day, had clean gone out of his memory again by the morning of the second day.

This man and his wife, who had either forgotten or purposely concealed one of Mr. Tompkins's visits within a year, — probably forgotten it at first and then denied it the second day for consistency, — are called to say from mere recollection, or rather from present recollection to correct the recollection of last spring, whether a talking machine was mentioned when the kit came in the fall of 1874 or when it came in the spring of 1877.

The Philadelphia statement shows — and this is not denied — that the date named — 1877 — was according to the unanimous recollection of Hardesty, his son, and Ditlow, expressed in January, 1883, and adhered to by Hardesty in May, 1883.

It appears that Hardesty's son and daughter were present at the interview which Mr. Tompkins had with Mr. Hardesty in April, and the consequence of which was that the latter came to Philadelphia, and where he made this written statement. Clearly as late as May, 1881, the recollection, not only of Hardesty himself, but of his son and his daughter, was that Ditlow's communication had occurred in the spring of 1877, and Ditlow's own recollection on the subject continued to be the same.

Ditlow's own recollection when he testified for complainants was distinct and positive that he first heard of the talking machine during the winter of 1876–7, and told the Hardesty family of it in the spring of 1877 on his return to the West; and, so far as appears, this continues to be his own recollection to this day.

When called by defendants in their surrebuttal he does not pretend that his personal recollection has changed a particle. He testifies (defts, iii, surbtl, 521): —

"*Q* 2. In that deposition, the 31st question and answer, on page 961, are as follows: —

"'*Q*. 31. Where, and from whom, did you first hear that Daniel Drawbaugh had a talking machine, or anything that was claimed to be a talking machine?

"'*A*. In the Milltown store; from George Drawbaugh.'

'You have had nearly a year's time for reflection upon the subject, and for refreshing your memory; and I will now put to you the same question: where and from whom did you first hear that Dan-

iel Drawbaugh had a talking machine, or anything that was claimed to be a talking machine?

"*A.* In the Milltown store; from George Drawbaugh.

"*Q.* 2. When did you first hear that Daniel Drawbaugh had a talking machine?

"*A.* I can't fix no date when I first heard of it.

"*Q.* 3. In your former deposition you stated that the time when George Drawbaugh first told you about it was in the winter, between the fall of 1876 and the spring of 1877, and that Jerry Fry kept the store at that time; what have you now to say on those points?

"*A.* I am satisfied that it wasn't correct; that I heard of it and saw it before that time.

"*Q.* 4. Have you any impression or recollection in your mind as to how long before that time you knew of Mr. Drawbaugh's having a talking machine?

" [*Objected to as calling for the witness's mere guess-work.*]

"*A.* No, sir; I can't fix no date."

Then follows a curious performance (p. 522): —

" *Q.* 5. Mr. S. S. Reed, who was examined here a few days ago as a witness on behalf of defendants, testified in substance that you told him about Mr. Drawbaugh's talking machine at Wheeler, Ind., in the early summer of 1870. Have you any personal recollection of that conversation with Mr. Reed?

" [*Objected to as leading.*]

" *A.* No, sir.

" *Q.* 6. Did you board with Mr. Reed in the early summer of 1870?

" *A.* Yes, sir.

" *Q.* 7. From your knowledge of Mr. Reed as a man, growing out of your personal acquaintance and relations with him, what is your opinion and belief as to the correctness of his statement that you told him about Mr. Drawbaugh's talking machine in the early summer of 1870?

" [*Objected to as leading and as incompetent.*]

" *A.* I am satisfied he is correct.

" *Q.* 8. Several members of Harmon Hardesty's family have testified that you told them about Mr. Drawbaugh's talking machine in the fall of 1874, at Wheeler, Ind. What is your opinion and belief as to the correctness of their testimony on that point?

" [*Same objections.*]

" *A.* I am satisfied they were correct."

With this puerile performance the defendants are obliged to be content; the witness has no recollection different from what he had before, and has no *fact* to help him turn around, but he is very willing. What made him so?

"*Q* 9. When you returned from Philadelphia last winter, after testifying there for the complainants in this case, who first called your attention to the erroneous character of your testimony at Philadelphia?

"[*Complainants object to the assumption that there was anything erroneous in the witness's testimony at Philadelphia.*]

"*A*. My sister, Mrs. Evans."

Mrs. Evans is the same woman who for some reason figures as the active agent in the perversion of her brother, Abraham Ditlow, and her husband, Jacob Evans.

Then Joseph Ditlow continues (p. 529) : —

"*X Q*. 70. After testifying at Philadelphia last winter you left there on Saturday, Dec. 30, and on Sunday, Dec. 31, you were at your sister's, Mrs. Jacob Evans, were you not?

"*A*. Yes, sir; I was there on Sunday.

"*X Q*. 71. When did you leave your sister's, and did your brother Abe stop there and leave at the same time you did?

"*A*. I don't know when I did leave. I was there several days.

"*X Q*. 72. Were you at Milltown during that week?

"*A*. Yes, sir.

"*X Q*. 73. How many times?

"*A*. Only once, I think.

"*X Q*. 74. Didn't you go there Thursday, and go to Daniel Fettrow's house?

"*A*. No, sir; I don't think I went there Thursday; but I was to Daniel Fettrow's house.

"*X Q*. 75. You were there again Saturday and Saturday night, were you not?

"[*The assumption implied in the word 'again' objected to as unwarranted by the testimony.*]

"*A*. Yes, sir; I was there on Saturday and Saturday night.

"*X Q*. 76. Your visit to Dan Fettrow's house was a day or two before that, was it not?

"*A*. I can't remember it that way.

"*X Q*. 77. How do you remember it?

"*A*. I remember of going there on Saturday and staying there Saturday night and Sunday forenoon, and going away on Sunday afternoon.

"*X Q*. 78. By 'there,' I suppose you mean Milltown, do you?

"*A*. Yes, sir.

"*X Q*. 79. You spent Saturday night at Dan Drawbaugh's house, did you not?

"*A*. Yes, sir.

"*X Q*. 80. Whom did you see at Milltown that Saturday and Sunday?

"[*Objected to as immaterial, and as not relevant to the examination-in-chief.*]

"*A.* I couldn't tell who all I seen.

"*X Q.* 81. Name those you remember.

"[*Same objections.*]

"*A.* I saw William Fettrow, the miller at the mill, and 'Squire Drawbaugh, Daniel Drawbaugh, George Drawbaugh, Daniel Fettrow, the blacksmith, and his son William, his son-in-law, — I think his name is May, — William Fettrow, the storekeeper, C. S. Clendennin, and his son, and Daniel Drawbaugh's family, — his wife and children.

"*X Q.* 82. Whom did Daniel Drawbaugh's family consist of?

"*A.* I can remember of three girls and one boy; and his son-in-law, William Sheeley.

"*X Q.* 83. Is Mrs. Sheeley Mr. Drawbaugh's daughter Laura?

"*A.* I think it is Laura; she is the oldest girl.

"*X Q.* 84. Where did you spend the bulk of the day Sunday?

"*A.* Down in Dan Drawbaugh s shop.

"*X Q.* 85. Who was there?

"*A.* Daniel Drawbaugh, George Drawbaugh, William Fettrow, the blacksmith's son, Fettrow's son-in-law, my brother Abraham, and Mr. Heiges, who works in the shop.

"*X Q.* 86. Where did your brother Abraham spend Saturday night?

"*A.* I think at George Drawbaugh's, in Milltown.

"*X Q.* 87. While you were there at that visit, Daniel Drawbaugh referred to your testimony, that you had spoken of his talking machine to the Hardestys when you went West in the spring of 1877, did he not?

"*A.* I don't remember.

"*X Q.* 88. He asked you to go and see the Hardestys, and find out what they remembered about it, didn't he?

"*A.* Yes, sir, I think he did.

"*X Q.* 89. There was considerable talk during that visit, about this case and about Drawbaugh's talking machine, was there not?

"*A.* Yes, sir.

"*X Q.* 90. Dan Drawbaugh said that his side would surely win the case, and that he should remember his friends, did he not?

"*A.* *I don't remember that he said that his side would surely win the case, but he said that he would remember his friends.*

"*X Q.* 91. Did your brother Abe go West when you did in January?

"*A.* No, sir.

"*X Q.* 92. About how long afterward?

"*A.* I don't remember; it was quite a while.

"*Redirect by Mr. Hill:*

"*Q Q.* 93. When Mr. Drawbaugh asked you to go and see the Hardestys and find out what they remembered, you had already had the conversation with your sister, Mary Evans, about your Philadelphia testimony, had you?

"*A.* Yes, sir.

"*Q Q.* 96. I mean, did you intimate to Mr. Drawbaugh, at that time, that you had begun to have some doubts about the correctness of your testimony at Philadelphia?

" [*Objected to as leading.*]

"*A.* I don't remember."

In view of all this, no other conclusion is possible than that Ditlow's own recollection, when he took the stand for defendants, was precisely the same as when he testified for complainants; and that while he may not have lacked the disposition, he did lack the hardihood to swear to any different story, as of his own knowledge or memory.

A large number of the complainants' witnesses have been personal friends of the claimant. Several of them have been recalled. Once and only once the defendants undertook to make an attack on the complainants about drilling witnesses, and so far as counsel was concerned they got just about the truth of the matter. Joseph Ditlow testified as follows (p. 523): —

" *Q.* 19. Did you get any instructions from them as to how you were to give in your testimony? If so, what?

"*A.* Yes, sir; we were trying to fix dates; he would ask me questions about dates; I couldn't remember; I could guess at it, so and so. He told me when I went on the stand not to guess at it, — give a straight answer.

" *Q.* 20. What do you mean by 'a straight answer'?

" [*Objected to as asking for the witness's opinion.*]

"*A.* Not to say 'I believe it was so, or I think it was so," but to say it either was so or was not so.

"*X Q.* 36. Mr Storrow cautioned you that upon the stand you should not guess, nor say you guessed, but should answer positively one way or the other, if you knew; and if you didn't know, say that you didn't, and not guess about it. Is not that the fact?

"*A.* Yes, sir."

Then they tried about Mr. Comfort, and Ditlow testified (p. 524): —

"*Q.* 21. While you were there at Philadelphia, did or did not Mr. Comfort prepare for you a written memorandum of dates?

"*A.* Yes, sir; he did.

"*Q.* 22. What did he tell you to do with it?

"*A.* He told me to read it over and study it, so that I will have it by heart."

"*X Q.* 35. You have been examined about some conversation you had with Mr. Storrow at Philadelphia, last winter, with reference to some dates. The dates that were particularly referred to in that conversation were dates of the particular places and persons at and for whom you worked during the last ten or fifteen years, were they not?

"*A.* Yes, sir.

"*X Q.* 37. The dates on the paper, which you say Mr. Comfort gave you last winter, were dates of the different places you worked at, were they not?

"*A.* Where I worked at and trapped in winter time."

The dates referred to were quite immaterial, and the witness was not asked about them.

If Joseph lacked assurance in turning around, his brother Abraham did not. He and Joseph were first visited by the complainants in June, 1882, and both then said that they had seen none of the instruments and had heard nothing of any talking machine. They thought it over; Joseph went to see the Hardestys (defts, iii, surbtl, 526); then they were visited again and were still of the same mind; more time elapsed, and when they testified in Philadelphia they had thought it over for seven months.

No. 283. *Abraham Ditlow*, defts, iii, surbtl, 876. — Brother of Joseph; Dec. 30, 1882, he testified in Philadelphia for the complainants (complts, ii, 967) that he first heard that Drawbaugh had a talking machine in the spring of 1877, from George Drawbaugh, at Fry's store. Fry did not begin to keep the store till 1876. He had been at Drawbaugh's shop a good deal as well as continually about the village from boyhood, and so far was a good witness.

He now testifies for defendants that he saw Drawbaugh's talking machine for the first time in 1874; was at Drawbaugh's shop during the whole of that winter; got a kind of sideboard or "safe" made there for his sister, Mrs. Evans, and also a tent and stove to go

trapping; both were made in Drawbaugh's shop by George Drawbaugh; does not remember the exact time when the safe was made, but it was soon after her marriage (September, 1874); it might have been a month; does not think it was longer. The stove and tent were made first. George Drawbaugh made the safe out of a bureau which witness's mother had. While the safe and tent and stove were being made witness was in Drawbaugh's shop "most of his time" (ans. 35, p. 879). And they were "all winter" making that safe (ans. 72, p. 884).

He was asked what knowledge he had of a talking machine while the stove and tent were being made, and answered (p. 879): —

"*A.* 36. I was there in the shop; and while George Drawbaugh was making the stove, Dan he was experimenting on a new machine; and he got George and I to go down-stairs and listen. And he talked to George; and then George told him to talk to me; that I would listen. We had lots of fun in them days with Dan. He wanted to know whether we understood. I understood it well enough, but George told me to tell him that I don't understand it, and it made Dan awful mad. He flew up and said I was the damnedest dumbest man in America, and I should get out of his shop. That is all of that answer.

"*Q.* 37. Do you mean to be understood that while Daniel Drawbaugh was talking through his machine, George and you listened down-stairs at the machine?

"[*Objected to as leading.*]

"*A.* Yes, sir.

"*Q.* 38. And that when you listened you heard and understood through the machine what came through it?

"[*Same objection.*]

"*A.* Yes, sir.

"*Q.* 39. And that at George Drawbaugh's suggestion in order to tease Daniel Drawbaugh, you reported to him that you did not understand?

"[*Same objection.*]

"*A.* Yes, sir."

Witness says he did not have in mind these matters of the making of the safe and of the stove and tent there at Daniel Drawbaugh's shop when he testified for complainants. That his sister, Mary Evans, the same woman who figures so prominently in the conversion or perversion of the witness, Jacob Evans, first called his attention to the safe, when he visited her after testifying at Philadel-

phia; and that Alexander Milner, at Porter County, Ind., first called his attention to the making of the stove and tent at Drawbaugh's shop, last spring, after witness had gone West after he testified at Philadelphia (ans. 43, p. 880). Witness alleges that he and his brother talked about it on the way coming back from Philadelphia, and that they made up their minds that they had seen the talking machine before 1877; and witness told his brother that if they did they surely told it to some one out there in Indiana. Witness alleges that he asked Milner whether he ever told him anything, and that Milner said he told him about the time they made the tent and stove, and that they had lots of fun with Drawbaugh.

Witness having testified that the first time he had knowledge of the talking machine, so far as he is able to positively remember, was in 1874, is now asked what *impression* he has as to whether he had seen or heard of before that time, and replies: —

"I am satisfied that I had seen it before that; the reason why, — my mother and sister told me that I used to come home when my father was living and tell them about it; and I have reason to believe my mother."

Filial, but not according to Greenleaf.

P. 881. "*Q.* 47. Will you state whether or not Mr. Daniel Drawbaugh or any of his relatives have ever said or done anything to refresh or influence your memory in this case?

"*A.* No, sir; they have not." . . .

They had him pass the night with them and spend most of the next day in the shop talking about the case (see x-ans. 85–9, p 593, *supra*).

Witness then says he recollects a conversation which he a[illegible]d his brother Joseph and John Free had with George W. Mumper, after witness's return from Philadelphia, where he testified in December, 1882. He says (ans. 49, p. 882) that Mumper said: —

"He thought it was strange when he heard that we was in Philadelphia and testified against Drawbaugh; we told him that it was a good while, and we had forgotten it; and he said that he had been up in Daniel Drawbaugh's shop in 1874 and seen the talking machine, and Dan wanted him to go into partnership with him; and he said he was a damn fool, — if he had went in with Dan he would have made his fortune."

Joseph's account of this same alleged conversation, and of Mumper's remarks, is very different from this (p. 524). According to Joseph, Mumper said to them, "Well, you are in this telephone scrape; how do you think it's going to go?" Joseph says he replied that he thought Drawbaugh would win it, and that Mumper then said, "I think so"; that he had it in 1874, and that was all.

John Free was not called to give his version of the talk.

Cross-examined (p. 883). Can't say when this conversation with Mumper was; nor what day of the week it was. My recollection is that I listened at the talking machine a number of times; I might have not talked through a number of times, but I know I was there, and George and Dan talked through. This was spread over a good while. Whenever he would make something new, why then they would try it, — new talking machine. He was experimenting, and when he got something new he would go and try it to see whether it worked. I am satisfied I listened more than once, but a person can't remember just how often, *for I never paid much attention to such a thing as that.* I would not say whether it was while George was working on the safe, but it was during that winter. It is my recollection that I saw them experiment after George got through working on the safe. If my memory is right, the safe was there all winter. I think it wasn't taken away until the spring. I mean to have it understood that I took part in this experimenting with the talking machine while the stove and tent were being made also. I wasn't doing any work that winter that I remember; not any more than helping George there and getting ready to go trapping; I might have threshed around, I can't remember that.

After testifying in Philadelphia I stayed in the neighborhood of Eberly's Mills nearly two months, but did no work. Soon after testifying I stayed over night with George Drawbaugh; and we went down to the shop and Drawbaugh showed us some of his machines. "I was with a good many" persons, "went around to see all my friends," "Alfred Ditlow, Robert McCleaf and David Ditlow, my uncle; my brother Samuel, and was over at my sister's to see my mother and my brother Emanuel. I was at a good many more places than that; for I made quite a round."

After I went West last spring I came on here again about the middle of October or along there; with the exception of a two weeks' trip West, have been in Harrisburg or over the river near here ever since. I fetched Mr. Reed, Mr. Milner, Mr. Clifford, Mr. Hardesty and wife, and son and daughter, and Joseph Ditlow in from the West.

I have done no work since coming here in October last. Have been staying most of the time at the Whitehall Hotel, Harrisburg. I suppose defendants have paid my board there; they said they would. I don't know whether I could tell you what I have been doing to occupy my time; I have been loafing around; I have played a good bit of pool, some euchre; sometimes I would go over to Mr. Evans's, and stay there awhile and visit my brother. Have been in Mr. Jacobs's office a good many times; not every day; sometimes it would be a week that I wouldn't get there.

Orlando Kahney has been living at the Whitehall Hotel with me most of the time; was living there at defendants' expense before he went on the stand; I don't know as he was there all the time at their expense. I knew that for a while he was there, and said he was at their expense and they stopped it off; and he hasn't been there at their expense since.

I don't know the exact time when my mother and sister told me that I used to come home when my father was living and tell them about the talking machine, but Mr. Jacobs and some one else came over, either this time or last winter when I was in; I don't know which time it was, but my mother mentioned it then; my mother had spoken to me privately pretty often about it. I am pretty sure it was this winter that Mr. Jacobs was there at Jacob Evans's place. It was there that my mother spoke to me pretty often about it.

This record, with the answers made by Joseph (p. 593, *supra*), sufficiently exhibits the temptations and influences to which these witnesses were subjected before taking the stand for the defendants; and the fact is revealed among others that before taking the stand Abraham was kept at defendants' expense for over three months at a Harrisburg tavern, dividing his time between the congenial occupations of "loafing around," "playing pool or euchre," and visiting his relatives and friends in the neighborhood of Milltown. Defend-

ants' counsel tried to break the force of this by asking the witness in redirect whether he had been ready to testify at any time since he came in from the West, to which, of course, he answered, "Yes." He is also made to say that he had been notified over a week ago that they wanted to examine him, but something interfered to prevent it; and that about the time his brother Joseph was examined he had also been notified that he would be examined, but that he was told this programme was interfered with by an adjournment in order to enable Mr. Storrow to argue a case in Washington; also that he had been notified several times since that, but his examination was postponed because there were other witnesses who were anxious to get away, or whose examination they did not desire to delay; and then (defts, iii, 889): —

"*Q. Q.* 112. So far as you know, have you testified to anything here on the stand to-day that you did not inform defendants' counsel that you were going to testify to when they first interviewed you on the subject last fall, except the conversation with your mother?

"*A.* I don't understand that question.

"*Q. Q.* 113. The question is whether you told us last fall all that you have testified to concerning Mr. Drawbaugh's talking machine.

"*A.* Yes, sir; I told them."

The adjournment referred to by defendants' counsel was for ten days in December, 1883, and of the 154 witnesses examined in advance of Ditlow, the great majority were resident in the vicinity, and many of them were called to give brief depositions on collateral matters. The defendants' counsel evidently felt that the excuses for the delay in calling Ditlow are not very satisfying, for they dismiss the subject by expressing the opinion in the record "that it is none of complainants' business whether defendant saw fit to put this witness on the stand at one time or another, nor is it of any materiality in this cause."

The greater thoroughness of Abraham Ditlow's conversion, however, compared with that of his brother Joseph, and the size of the story he tells about Mumper, seem to be in exact proportion to the greater length of his tarrying in and about Harrisburg and Milltown. Joseph hardly pretends to have changed his recollection, but is content to say that he believes, from the character of other wit-

nesses, that they are probably telling the truth. Abraham says as much about his mother and sister, but now professes a lively recollection about the talking machine. The difference between his former deposition and the present one is not upon a mere question of dates. He then had no knowledge of the talking machine, except having heard of it from George Drawbaugh. Now he pretends to a whole winter spent in the shop and very frequent experiments with it. It is impossible that when he testified at Philadelphia, after seven months to think the matter over in, he could have forgotten such an occupation, if it had ever taken place. Nor if true, is it conceivable that George Drawbaugh, when on the stand, should make no allusion to it: yet George tells no such story, but testifies, on the contrary, that from 1874 to 1877 he wasn't much in the shop, only what short time he worked for the Axle Company in 1875, and that he cannot say what Daniel was doing during that time (defts, i, 625, 629).

That Daniel Drawbaugh himself has no recollection of any such state of affairs as now testified to by Abraham Ditlow is evidenced by the cross-examination of Ditlow when testifying for complainants. Nothing of the kind was suggested in Ditlow's cross-examination. Moreover, it appears from the depositions of both Abraham and Joseph that Abraham spent a Saturday night with George Drawbaugh, and a large part of Sunday with all of them at the shop. If Daniel or George had the slightest recollection of this long winter of experiment they would have mentioned it then. Yet Abraham's express testimony is that none of Drawbaugh's family did anything to refresh his recollection (ans. 47, p. 597, *supra*). He says that it was only after he got to the West that it was brought to his mind by Milner. It is plain from his answers that he is swearing to generalities without any real recollection.

No. 219. *Alexander Milner*, defts, iii, surbtl, 512. — Age, forty-seven; Porter County, Ind.; farmer. First knew Abraham Ditlow in 1876. In May or June, 1876, Ditlow mentioned Drawbaugh's talking machine. Said he had seen it, when he went down to see about getting a stove made to go trapping with. Said Drawbaugh told him he had invented a talking machine, and that he would go down below, and for him to stay up there, and he would talk to him. After Drawbaugh started down Ditlow said he followed him down.

He said after he got down there, he (Drawbaugh) asked him why he didn't stay up. He said he thought he was just fooling him; that *he didn't suppose he had any such thing as a talking machine.* Drawbaugh then called him to a bench where he had it, and told him he would show him what he had; don't recollect anything more that Ditlow said then, only that wires ran up through the floor.

Ditlow said he was all the time joking Drawbaugh about one thing or another. Ditlow didn't suppose he had invented any such thing (defts, iii, 514): —

"*Q.* 10. Do you mean, didn't suppose so when Drawbaugh first wanted to show it to him, or when Ditlow was talking to you?

"*A.* I don't know which he meant. I suppose when he was inventing it, probably."

That is (if we are to take this witness at all), Ditlow, though long intimate at the shop, did not believe in the winter 1874–5 that Dan had invented the telephone. This is bad for the claimant's story.

Abraham Ditlow said that Drawbaugh had no patent on his talking machine, that he was too poor to get one on it.

Ditlow and his brother have both lived in the same place — Wheeler, Porter County — ever since he went West in 1876. All the talk with all these Wheeler witnesses may have been in 1877; the date rests purely in memory. It is striking that none of them recurred to it when telephones became known, if the talk was before that.

No. 220. *C. B. Clifford*, defts, iii, surbtl, 515. — Age, thirty-four; Porter County, Ind.; farmer. Got acquainted with Abraham Ditlow in the spring of 1876. In May or June of that year, when they were ploughing together, Ditlow said that there was a man in the East who had invented a talking machine; called his name Daniel Drawbaugh; said he could talk through the shop with it; that he (Ditlow) had seen it; all witness can remember of Ditlow's describing it, — there was a glass tumbler attached to one end of it. By the way he told it, he (Ditlow) had seen it some time before that; but he didn't say any certain time. Ditlow said that when he left there he told Dan that he hoped he would get a patent on it, for he thought there was money in it for him. He said Drawbaugh told him he was too poor;

that he couldn't get it done. Ditlow told witness that Drawbaugh had invented clocks, and had made a stove for them for trapping. Witness never had any other conversation with Ditlow about the talking machine prior to the time Ditlow went to Philadelphia to testify in December, 1882.

The testimony of Milner and Clifford, if competent for any purpose, is so only as to the alleged fact of Ditlow's mention of the talking machine to them. As to the alleged nature of Ditlow's declarations to the parties respectively, nothing need be said, save that they do not appear to be very consistent. Milner's story of what Ditlow said to him implies that Ditlow had no faith in the talking machine, but regarded it as a huge joke seven years after the time when the defendants allege complete success; while Clifford's story represents Ditlow as recommending Drawbaugh to patent the thing, as "he thought there was money in it." Clifford's story is, in some respects, more particular as to what Ditlow "said" he saw, than is Ditlow's own story as to what he saw.

As most of Ditlow's time since 1876 has been spent in the West, in the vicinity of where Milner and Clifford live, the most charitable supposition is that Ditlow's communications to them were made at a later date than that testified to by Millner and Clifford, who give no satisfactory reasons for fixing upon 1876 as the time.

No. 195. *Emanuel Ditlow*, defts, iii, surbtl, 389.—He is a brother of Joseph and Abraham Ditlow and of Mrs. Mary Evans. He lived at home with them up to 1873, and when asked whether he cannot say that Drawbaugh's talking machine was a matter of common conversation in and around Milltown, he assents to the leading propositions stated to him by defendants' counsel, and that is about the whole of his testimony. The witness has got nothing to fix any date by, and has lived all his life on the edge of the village.

The Kahney Family.

The father and four sons have testified in this order:—

No. 27. *Ira D. Kahney*, defts, i, 210.

No. 39. *Norman W. Kahney*, defts, i, 288.

No. 53. *Orlando B. Kahney*, complts, ii, 990.
No. 166. *Orlando B. Kahney*, defts, iii, surbtl, 224.
No. 169. *Augustus Kahney*, defts, iii, surbtl, 254.
No. 134. *John Kahney*, complts, iii, 2033.

The father, John Kahney, lived in Milltown from the spring of 1871 to the spring of 1875; then he moved to Martin Best's tenant house a mile away until the spring of 1879, and then to White Hill, a mile or a mile and a half away. The sons all lived with him except Orlando, who during most of the time was hired out all summer to W. Sadler and W. Walters.

No. 27. *Ira D. Kahney*, defts, i, 210. — Age, thirty-two years; called by defendants in chief. Had known Drawbaugh twenty years. Says that he first saw talking machines at Drawbaugh's shop between 1871 and 1872; they were F and B; that he heard distinctly what was said at different places; that from then down to the summer of 1880 he was constantly at the shop; sometimes every day, sometimes every week, and sometimes every month; that he saw the old and the new machines together; that in 1873 and 1874 he heard talk through A; that it was a couple of years after he saw A before he saw D and E. As the date alleged by the defendants for A was in the late fall of 1874 (see Smith, p. 27, *supra*), and as this witness was a very constant visitor, his testimony thus put D and E in the summer or fall of 1876, about where Springer (pp. 57–9, *supra*) put them, and much after Mr. Bell's patent. Since these two constituted the first practical apparatus, this would not do. So there ensued one of those scenes which show that the defendants know that the so-called recollection of their witnesses is nothing but a piece of guess-work on the impulse of the moment, except where shaped by previous training, — to be believed if it helps their case, to be rejected if it does not (p. 213): —

"*Q.* 36. What is your best recollection as to how long it was after you first saw A before you saw these two, D and E?
"*A.* It was a couple of years.
"*Q* 37. Do you testify to that with certainty, or only as to your best recollection?
"[*Objected to.*]
"*A.* To my best recollection."

He continues: —

"*Q.* 38. Please look at the machines now shown you, marked 'G, K, L, M, N, O,' and state whether you ever saw them, or any of them, at Mr. Drawbaugh's shop, and if so, can you give the time?

"*A.* I may have seen all the machines, but, of course, I couldn't give the times when I seen any of them."

Then he says: —

"*Q.* 47. Do you recollect seeing Mr. Drawbaugh working in his shop late at night on the talking machines, at any time or times?

"*A.* Yes, sir.

"*Q.* 48. How often do you remember that occurrence?

"*A.* I hardly know how often; I have been there so often at night that he has been working on them, that I would hardly know.

"*Q.* 49. From all you saw of Mr. Drawbaugh and his work, from 1872 down to 1880, what invention would you say that he was principally working on and giving his attention to during all that time?

"*A.* I would say the talking machine.

"*X Q.* 50. What other inventions did he give attention to during that time?

"*A.* He was working at the molasses faucet for one that I know.

"*X Q.* 51. Do you know of any others that he was giving much attention to during that time, and if so, what were they?

"*A.* No, sir; I know of none, for my part."

"*X Q.* 54. How did you happen to be there so often, nights?

"*A.* Because I live right close there, and I used to go there to pass the evening."

During those years from 1872 to 1880, it is certain that Drawbaugh spent much more time on the clocks and other machines enumerated on pp. 329 *et seq.*, *supra*, than he did on talking machines; yet this witness, an almost daily visitor, pretends that he saw him all the time at work on the one and knew nothing about the others; that is romance, — such clear recklessness of statement in favor of what he thought he was wanted to swear to as to amount to falsehood, — it is not memory.

It is a noteworthy and suggestive fact that this witness, who figures as a constant visitor at Drawbaugh's shop down to 1880, does not pretend to have heard any talk, at any time, through Exhibits D and E, the only instruments out of all those pretended to have been made prior to Bell's patent which are practically operative

talking machines. He says he heard speech distinctly through F and B; he did not; they cannot talk.

No. 39. *Norman W. Kahney*, defts, i, 288.—Age, twenty-three; called by the defendants in chief. First lived in Milltown in 1871 (ans. 10, p. 288), and was then, therefore, thirteen years old. Says that he first talked through the talking machine in 1872; cannot recognize the instruments. He thinks he did not visit Drawbaugh in 1873 or 1874; was at the shop in 1875 and 1876. Has in his memory one special visit in view which he made during that time. That special visit was in 1876 (ans. 33, p. 290). Then Drawbaugh showed him A; held it to his ear and heard Drawbaugh, who was in another room, speak. This was in the evening. Did not see the instrument on the other end. Has been there frequently since 1876 till the present time (ans. 49, 50, p. 291). Does not know whether he saw A or not in these subsequent visits; may have seen other instruments, but did not know whether they were for talking or not. Does not remember anything that Drawbaugh said to him after that time; he did not say anything about patenting them or putting them in use after 1876.

If the witness is to be believed, he distinctly remembers a specific visit some time in 1876, when he heard speech through A. At the time when he thus says A was used, D and E are said to be in existence for more than a year. Drawbaugh expressly testified (defts, ii, 1046) that A did not work well with a magneto transmitter, and the only battery transmitter pretended up to that time was F; he also testified that A was much inferior to either D or E. Once in possession of D and E it may be taken for granted that Drawbaugh never used A with any transmitter for the purpose of exhibition, and that he certainly never used F and A together for the purpose of exhibition after he had D and E. The New York tests and his own testimony show this. If this witness listened at A at the time he professes to distinctly remember (1876), then D and E did not exist at that time. His brother Ira confirms this by showing that, being there almost daily, it was the fall of 1876 before he saw D and E (see p. 604, *supra*).

These two witnesses, so far as they are worth anything, therefore, prove that D and E did not exist in the spring of 1876.

This witness has evidently mixed the clock and telephone in his mind. With reference to the later visits of 1875 and 1876, he says (p. 289): —

"*Q.* 27. Please tell us all he said in reference to his talking machines.

"*A.* He said that the machine was operated by electricity — by a battery; he said that he had intended to try them, to put them on test from his shop along the creek; he said — he spoke of running a line, and get a man from Mechanicsburg to go in partners with him to have the thing patented; that is about all I can remember that was talked at that time.

"*Q.* 28. During these visits in 1875 and 1876, have you in your memory any special one in view?

"*A.* Yes, sir."

According to this answer, one of the statements made by Drawbaugh was, that the instruments at that special visit in 1876 which he has in mind and along about that time operated by a *battery*. The only *battery* instrument alleged to exist then was the transmitter F, and Drawbaugh certainly would not have referred to that as his machine or exhibited it if he had the magnetos D and E.

Again, the witness says that Drawbaugh spoke of a man in Mechanicsburg going as partner with him. There is not a pretence in Drawbaugh's testimony that he ever thought of having or asked any Mechanicsburg man to join him about the talking machine, but in the fall of 1876 he did expect Mr. Shapley of Mechanicsburg to go partner with him in the clock, and they made a preliminary written contract to that end, in November, 1876 (Shapley, p. 416, *supra*).

This witness is useful to the complainants in another matter. George Drawbaugh said that his first knowledge of the talking machine was when his uncle was helping him to paint Sadler's wagon, and they attempt to fix that date as 1870 (p. 198, *supra*). We showed very clearly that Sadler did not have his wagon till 1871 (p. 199, *supra*). Drawbaugh testified (ans. 171, defts, ii, 809) that when painting that wagon he had C on the bench, and that "a boy, Norman Kahney," came along. Norman Kahney was then thirteen years old; he first lived in Milltown in 1871 (ans. 10, p. 238).

No. 53. *Orlando B. Kahney*, complts, ii, 990. — Age, thirty years; residence, Illinois. Called by the complainants at Philadelphia, Jan. 2, 1883; he testifies that his acquaintance with Drawbaugh was ever since 1871. In the spring of 1876 he helped to move Drawbaugh to Mechanicsburg; and in the spring of 1877 helped him to move back again. Says that at least fourteen horses were used to haul his household stuff up and sixteen horses and perhaps another team to haul it down. Used to call at Drawbaugh's house more particularly after he moved from Mechanicsburg to Milltown. It was well furnished; carpet on the parlor; parlor organ; base burner stove. The daughters and children of the family were as well dressed as anybody. Knew of Drawbaugh's selling a secretary to Reneker after he moved down in the spring of 1877. "He had two, he said, and didn't need but one" (ans. 34, p. 993). "I think the one he sold was one he made himself." He then testified that he was at Drawbaugh's shop a great deal, and stated the circumstances which led him to frequent it. Said that he first heard that Drawbaugh was at work on the talking machine at a time which he stated was soon after he came home from the Centennial, which the hotel register at Philadelphia shows he visited Oct. 31, 1876. Drawbaugh told him this in the machine shop when talking about the machinery at the Centennial, but he did not then see any. He then testified that he took a boat ride with Drawbaugh's daughter and another young lady on the same day. It subsequently appeared that the boat ride could not have been until after the first of April, 1877. So that his first knowledge of the talking machine may have been in the fall of 1876, or may have been in 1877 (pp. 994, 1001). The witness afterwards saw a talking machine at the shop, and Drawbaugh asked him to listen at it; so far as he can remember he did not understand what was said. This was when he went to Drawbaugh's to borrow a sledge, as he was going to work to quarry stone for Sherbone, which was in the beginning of 1878. This was the first time he had seen a talking machine. The instrument he listened at was "a dark-colored piece of wood and had a mouthpiece on, — round" (ans. 87, p. 998), but he cannot identify it. Has at some time seen F and B there; does not know when, and did not know what they were for. At some time saw a box with a bell. Does not recognize H as that box:

thought it was part of a clock. Has seen something like A at Drawbaugh's. Does not remember when he saw the things like F and B and A, — whether it was before or after Drawbaugh first spoke to him about a talking machine.

He was cross-examined with great vigor as to all manner of details. The cross-examining counsel had Drawbaugh handle the various exhibit instruments, and put H and others against the wall of the room (p. 1015), and then endeavored in every way to try to get the witness to say he remembered that he had seen them, particularly to remember that they were instruments that were used when he heard speech, but the witness could find nothing of the kind in his recollection.

The cross-examination, which extended over most of two days, was such that it certainly would have aroused his recollection, if he had ever seen the instruments. It is important to notice, however, throughout this long cross-examination, that the defendants' counsel, with Drawbaugh by his side, never once put to the witness a specific instance or time or circumstance of hearing or seeing or knowing anything of the talking machine. It is clear, therefore, that Drawbaugh had no recollection of any specific instance.

In November, 1883, the defendants recalled this witness in surrebuttal (defts, iii, surbtl, 224), and he then undertook to change his testimony entirely. He said that in 1875 he worked for Wilson Walters as hireling, and that his fellow-laborer was Milton Basehore; that in July or August, 1875, they went to Drawbaugh's shop to grind cradle scythes; that then (p. 226)

"Drawbaugh took me to one corner of the shop, and he picked up an instrument there with wires attached to it — at least I thought that it was wires; he told me to place it to my ear, and I done so; he went out of the shop; I don't know whether he went out of the shop or not, — yes, he did. He went out of the shop by the lower door, and I heard his voice by or through that instrument."

He says that he understood what was said. This was on the first floor above the basement. Says that the instrument was "two inches across or two and a half or maybe a little more," and so far as he remembers, "round, flat on two sides, with a hole on one side as a mouthpiece" (p. 227). He does not identify it. Says that late in the fall, after leaving Walters, and while working for J. Best, he

as at Drawbaugh's shop, and Drawbaugh asked the witness to lend him $75 or $100 to get his talking machine patented.

He says that he had forgotten all these things when he first testified, and the memory of them came back to him after he went West, and that what caused them to come back to his memory was "studying over being in Philadelphia and all about it." (P. 230): —

"*Q.* 49. And you wrote to Mr. Drawbaugh informing him of it in order that no injustice might be done by the mistake which you saw that you had made at Philadelphia; is that the way of it?

"*A.* Yes, sir."

The witness had been visited in the West by the complainants seven months before he first testified. He had thought it over during that time. Nothing of this kind came to his recollection then. He was rigorously cross-examined and nothing of the sort came to his recollection, nor to the recollection of Drawbaugh during all that time. Finally, he says, it did come to his mind after he went West, and a powerful sense of justice led him to write to Mr. Drawbaugh Feb. 1, 1883, a letter, printed on p. 225, stating that "last night it came to my mind the first that I ever heard of a talking meshien, it was in seventy-five, and know exactly when it was or can find out with very little troubel."

That this man, living in the village and a constant visitor at the shop, first heard of it in the summer of 1875, flatly contradicts the story they allege; for they say that it had then existed and been universally known for seven years, and that this man's brothers had known it three years.

It turns out that after testifying in Philadelphia he went to Cumberland County and made a visit there; saw Drawbaugh a number of times; went to his house and saw his family. After writing to Drawbaugh that he saw a talking machine in 1875, he wrote to the complainants' counsel the following letter, p. 243: —

TRIUMPH, *March the* 8, '83.

FRIEND STORROW

I thought I would rite you A few lines to let you know that I got home all right and am feeling as good as ever and to let you know that I herd from Dan and that he wants me to Come back again and I have thought over some of my deposition and I find that I have have testified to some things that I wasnt right about

and would right them if I could or would get A Chance and hope that I will I do now believe that thare was a telephone thare as far back as 1873 and know thare was and am glad that it has come to my reckalection and am very sorry that I have give in the evedens that I have I have had telephone on the brain ever since I got back and I want you to wright to me and tell we what I had beter do I can keep out of their way if you say so dont fale to right and give me advise and tell Comfort that I still Play seven up sometimes with this I stop your

Friend ORLANDO B. KAHNEY.
Adres Triumph Lassalle County Ill.

Getting no answer to that, he wrote another letter: —

WARNER HOUSE,
HENRY KEPPEL, *Proprietor.*

MENDOTA, Ill., *May the* 23, 1883.

Friend Storrow I thought I would rite you and let you know that I am geting along well and to ask an advise of you whether I had better or not com and testify on the other side Dan he says he wants me to come rite and let me know what you think about it.

ORLANDO B. KAHNEY.

Adress Mendota Lasalle
County
Ill.

There was but one meaning to these letters. He had offered to one side to contradict his former testimony, and now offers to the other side not to do so. None of the controlling sense of justice ostentatiously held up on his direct examination. Of course he never received from the complainants any answer to them, nor any communication whatever afterwards.

It is worth noticing that on the 1st of February, he wrote to Drawbaugh that he first heard of the talking machine in 1875. A month later he wrote to the complainants that it was in 1873 and that "he knew" it was. The defendants' counsel had to try to get him to explain why his recollection was so unstable, and he testified (p. 243) that the visit he referred to as that of 1873 was a different one from the one referred to in the letter to Drawbaugh, and not a mere mistake of date. On re-cross examination he took that all back and said (p. 247 xx 189) that he did not see any talking machine in 1873.

No. 147. *Milton Basehore*, defts, iii, surbtl, 116.— Age, twenty-six years. Is called to confirm this new story of Orlando Kahney, and says that he was with Kahney on that visit to Drawbaugh's shop to grind cradle scythes. After finishing grinding the scythes "we remained a short time"; "we looked at the machinery, and then *we* talked over what he called the talking machine" (ans. 17, 18, p. 118). Then the "we" dwindled at once; it was Orlando Kahney who listened while the talking was going on (ans. 19). Drawbaugh was some place else; witness did not see him. Witness had a talk with Kahney going home that day. Kahney told witness that if he *had been with him*, he would have heard Drawbaugh talk over a wire.

Asked by a leading and suggestive question to explain what he meant by the phrase "if I had been with him," witness says he was in the shop, but not close to Kahney; witness had his mind turned towards the other machines; was looking at them.

Then he testified (p. 119): —

"*A.* 23. He told me Mr. Drawbaugh was at his house while he was talking over the wire."

"*Q.* 29. From the conversation that you had with Mr. Kahney, as you and he were going home from Mr. Drawbaugh's shop that day, did you at that time form the impression that Mr. Kahney had known about Mr. Drawbaugh's talking machine before, or that it was something new to him which he had never before known about?

"[*Objected to as calling for incompetent testimony, and because the subject has been exhausted by the previous answers.*]

"*A.* I supposed he knew it before, the way he talked.

"*Q.* 30. Do you at this time remember what he said that gave you the impression that he knew it before?

"[*Same objection.*]

"*A.* The way that he told me that the wire was from Drawbaugh's house to the office there or room that we were in."

All this is hardly more than hearsay. The witness did not listen at any machine; he would have done so if anything could have been heard; he does not pretend to describe or identify the machine. If he proves anything he proves that Kahney knew of it before. Kahney wrote to and testified for the defendants (ans. 8, p. 226) that his visit with Basehore (whenever it was) was the first time "that he ever heard" — "the occasion when he first knew" of a talk-

ing machine. Basehore also proves by the two answers quoted, if he proves anything, that the line was from Drawbaugh's house to his shop. No such line existed in 1875; if it ever existed it was only as a line running to the house or part way to the house, and first put up in the winter of 1877–8. (See p. 410, *supra*.)

Kahney, when on the stand for complainants, was cross-examined by defendants to show (complts, ii, 1010) that he had no knowledge of electricity and no capital, — he was hired at $15 a month, — and was therefore not in a position to aid Drawbaugh, either by making suggestions or by furnishing money to get a patent. These questions would certainly not have been put to Kahney if Drawbaugh had had the slightest recollection of ever having asked him for a loan to patent the talking machine.

No. 148. *Wilson P. Walters*, defts, iii, surbtl, 121. — Testified that Basehore and Kahney were in his employ several years ending in 1875. Was not asked whether they ever spoke about telephones or whether he ever knew about any. Being subsequently called by complainants (complts, iii, 2030), together with his wife, both testify that neither Kahney or Basehore said anything about a talking machine at Drawbaugh's; does not think he would have forgotten it, if either of them had mentioned it; and that he never heard that Drawbaugh had invented a talking machine, or had one at his shop before this case commenced. Now Mr. Walters is a respectable man, of substance; has lived not far from Milltown for about twenty-five years, and is a man to whom Drawbaugh would be much more likely to turn for a loan to have an invention patented than to a day laborer like Kahney.

The defendants then ventured upon another one of the Kahney family with perhaps worse results.

No. 169. *Augustus Kahney*, defts, iii, surbtl, 254. — Twenty-eight years old; laborer. This witness is one of the striking examples of the manner in which training and surrounding influences can produce a witness of the kind the defendants repeatedly offer. There are no instruments alleged in the case of such importance as D and E, for it cannot be pretended that any of those which come

before them in the defendants' programme amount to practical instruments. Augustus Kahney, now produced in rebuttal in November, 1883, testifies that he worked for the Axle Company early in 1875 cleaning up and preparing the shop before the Axle Company actually began to work and before any axles were made; that he saw Drawbaugh's talking machine in the room upstairs. He undertakes to describe them, and finally very dramatically is requested to go without counsel to the examiner's room and select the machines he can identify as those seen at that time, from the whole collection. Of course he had seen them recently; it needed no more training than a circus poodle has to do this; but he went through with the exhibition and reappeared with A and E. If all this came from a witness of reliable memory it would have a great deal of value, for their witnesses to D and E in the spring of 1875 were few and weak; but presently upon cross-examination it appeared that between the spring of 1880 and the fall of 1881, that is, while the defendants were taking their testimony in chief, Drawbaugh and Mr. Jacobs and Mr. Bowman went twice to this Kahney to see if they could not get him to remember something, that he might be a witness, and the result was that they did not call him.

Again, — and the defendants introduced this in chief, — six months before, in May, 1883, Mr. Comfort, for the complainants, had an interview with this Kahney, at the United States Hotel at Harrisburg, and showed him some instruments; and the witness testified in chief that he told Mr. Comfort that he had seen an instrument like that shown to him, but the defendants carefully avoided asking him if he told Mr. Comfort *when* it was he saw it. Upon cross-examination it appeared that at that interview with Mr. Comfort, Kahney did state very fully his recollection about the subject, and that his statements were written down, were read over to him, and by him signed; and when the paper is produced and read he does not pretend that he failed to understand it, and he admits that he believed it to be true. That statement (printed p. 262) is: That he worked for the Axle Company nine or ten days in the spring of 1875; that "at that time Dan had no talking machine to my knowledge"; that he lived on Martin Best's Creek farm during the year 1879; that he was at Drawbaugh's shop a great many times and saw

a considerable number of his inventions which he names, such as machine to ring bells; machine to tell how much electricity was in a man; nail machine; bag folder; insulating machine; cider mill; shocking machine; electric clocks; but first saw a talking machine at Drawbaugh's shop, while he resided at Martin Best's farm between April and August, 1879, and that the machines he then saw looked something like E and something like A; and that he never heard his brothers talk about a talking machine.

So that this witness, who in his direct examination appeared to be a fairly good witness to a very important point, knew nothing about telephones material to the case in 1881, when the defendants first solicited him to testify, and, six months before he came on the stand, declared in writing that when he worked for the Axle Company in 1875, — the time about which he is now called to testify, — he is sure he never saw any telephones, but first knew of them in 1879. But afterwards it came to his mind that he knew all about them and saw them while he worked for the Axle Company.

It will be impossible to find a more outrageous case of a witness whose imagination and feelings have been worked upon until he has been brought by some influence to testify positively to facts which it is certain both from his interviews with the defendants and their counsel in 1881, and from his positive written statements in 1883, were either entirely outside of his recollection or distinctly contrary to it. It does not help him that he is O. Kahney's brother.

One fact stated in his written statement is worth noticing, because he is not asked on the stand to deny it and does not deny it, and that is, he never heard either of his brothers say anything about a talking machine.

He testified that in August, 1877, he was at Drawbaugh's shop, and saw telephones, and as he came out our witness, Amos Frownfelter, went in — with the inference that Frownfelter saw them there. This is too late to affect either of our patents; we then had 1,000 telephones in use. But Frownfelter had been talked with by the defendants and called by them on other topics; they had called several witnesses merely to prove the existence of telephones there at later periods (Levi A. Bowen, defts, i, 483; W. D. Shoop, *ib.* 484); if Frownfelter or Drawbaugh, after their talk or during Frownfelter's

cross-examination, had remembered such an occurrence it would have been mentioned. Against those facts Augustus Kahney only hurts himself.

No. 134. *John Kahney*, complts, iii, 2034. — The father of the preceding; called by the complainants in rejoinder. A full abstract of his testimony is given on pp. 465–7, *supra*. Briefly it is, that he was a very frequent visitor at Drawbaugh's shop from the spring of 1871 to the spring of 1875 (when he worked a day hoisting in the Axle Company's machinery), and an occasional visitor afterwards. He saw most of Drawbaugh's inventions, but saw no talking machine and heard of none until about 1879. He remembers reading of the transmission of speech by Mr. Bell over a line eighteen miles long, after the Centennial, and that this was the first time he ever heard of anything of the kind.

The testimony of this witness shows that he is an intelligent and observing man; that his opportunities for seeing or hearing of the alleged talking machine, if there was, in fact, anything of the kind to be seen or heard of, were ample, and that he has an uncommonly clear recollection of those things which he had seen or heard of. His testimony, therefore, is a most effective answer not only to that of his sons, but to much of the other testimony introduced by defendants in their so-called rebuttal.

The Darr Family. William Darr, the father of this family, was a witness for complainants (complts, i, 358) and testified in substance that he had lived at Milltown for twenty years, down to 1870; while living there often visited Drawbaugh's shop, and never saw or heard of any "talking machine" there. Being shown the defendants' exhibits, he says he never saw them. (See abstract of his deposition, p. 489, *supra*.)

To rebut this, defendants called Darr's wife and two daughters, and the husband of one of these daughters, and their testimony is as follows: —

No. 15. *Mrs. Margaret Brenneman*, defts, iii, surbtl, 103.—Lived with her father, William Darr, in Milltown until he left in 1871.

Married Dec. 24, 1872; worked about eight or nine weeks as servant in Drawbaugh's family in the first half of 1869, while Carns boarded there; has never been at Milltown since 1870. Says that while there she heard that Drawbaugh had a talking machine; saw a glass; it was talked about in his family by his wife and all his boarders; I am positively sure that I heard Jacob Carns talk about it; it was quite commonly talked about; a good deal talked about. Mrs. Drawbaugh opposed him about it; I talked about it with my father. My father drank a great deal and impaired his bodily health and has been a man of unsound condition since that time. My mother separated from him two years ago because he was cross in consequence of drink; he has a nervous disease since, — St. Vitus's dance, I think. It has affected his memory very much.

Cross-examination: "Drawbaugh's talking machine was very much talked of; I heard folks speak about it; that they thought it would be a great thing if he could get it accomplished" (p. 108). Her aspersions on her father will not be believed, inasmuch as she and her husband lived with him from 1872 to 1875.

No. 16. *Mrs. Darr*, defts, iii, surbtl, 109.—Wife of William Darr. By grossly leading questions she is made to appear to say, or rather, to assent to the following: "I heard my daughter Maggie and my daughter Jennie speak of Drawbaugh's talking machines while they lived with his family." "My husband came in one day and said that Drawbaugh was speaking of making a telephone or some sort of talking machine that he could talk across the ocean with to other parts of the world, and he (my husband) told him he had better invent something to talk across the Yellowbreeches first"; "this was in 1866." "His talking machine was generally known and talked of among the people before we left in 1870." "Before 1870 Darr was intemperate, and his nervous system has been out of order very much since that time"; "he stopped drinking because the doctor said he would die if he did not"; "am told he is better now." "I separated from him because he was abusive and did not provide for me." "His reason was affected."

P. 112. "*X Q.* 34. I suppose while you were living in Milltown you heard talk of quite a number of things made by Mr. Drawbaugh; is that so?

"*A.* Yes, sir.

"*X Q.* 35. Tell us what they were, or those which you recollect.

"*A.* The first was a stave cutter, a stave jointer, a molasses faucet, clock, and telephone.

"*X Q.* 36. What kind of a clock was this of Mr. Drawbaugh's which you heard of while you were at Milltown?

"*A.* That I never heard the name of that I can mind of — what the name of the clock was.

"*X Q.* 37. Well, tell us what you did hear about the clock while you were at Milltown.

"*A.* I just heard that he was making one, and had finished it, and taken it out.

"*X Q.* 38. Had taken it out where to?

"*A.* To Harrisburg.

"*X Q.* 39. What, if you know, had he taken it to Harrisburg for?

"*A.* To show.

"*X Q.* 40. Was this told you by some particular person, or was it general talk at Milltown?

"[*Same objection.*]

"*A.* It was general talk."

"*X Q.* 42. This clock which you have mentioned was an electric clock, was it not?

"*A.* I can't remember the name of it.

"*X Q.* 43. Still, you quite clearly recollect that there was general talk about it at Milltown?

"*A.* Yes, sir."

Drawbaugh's electric clock was exhibited in Harrisburg, *but that was in 1878;* he never exhibited any clock before; and it was a subject of general talk. But all this was seven years after she moved away. Plainly she kept up her connection with her old home, where her sister Mrs. Miller still lives; and her dates are good for nothing.

No. 146. *John M. Brenneman*, defts, iii, surbtl, 114. — Never was at Drawbaugh's shop; married Maggie Darr, Dec. 24, 1872; never stopped in Milltown; have lived with my father-in law from December, 1872, to the spring of 1875, at Highspire. In 1873 heard the Darr family and George Brown's wife speak about Drawbaugh's being smart and getting up different apparatus — the clock and telephone; heard him speak of it different times.

No. 155. *Mrs. Jennie Brown*, defts, iii, surbtl, 163. — Another daughter of William Darr; lived in Drawbaugh's family from the fall of 1867 to April, 1868, as servant, in the old red house behind the mill. Says that she heard of Drawbaugh's talking machine a couple of years before she went to live with him; but did not see it till she lived there; says that while she lived there she heard Mr. and Mrs. Drawbaugh speak of it, and heard Mrs. Drawbaugh scolding Mr. Drawbaugh considerably about its not amounting to a pinch of snuff; about wasting his time and money; that she heard others speak of it, and heard it spoken of in her father's family before her marriage, which was July 17, 1868; that her father often said to her that if Drawbaugh were able to get it accomplished he would be a very rich man some day, and he thought it was a very good invention. To a leading question she said that she heard that Drawbaugh talked through it when she lived with his family; that his wife was very much opposed to it, and while living in his family she saw a cup and glass and something that looked like a string or wire. Says that the cup was a common white stone teacup and the tumbler a white glass tumbler; he then said that these were parts of his talking machine; Mrs. Drawbaugh always made light of it (p. 105): —

"*Q.* 26. Was it or not common talk in that community?
"*A.* That was all the talk for a while; some of the folks made light of it, and others thought it was very good."

Thinks that her father is a little weak-minded, and was nervous for the past four or five years; he has been weak-minded somewhere along two or three years; I don't think his memory has been reliable for the last two or three years. I never talked through the machine; I heard Mr. Drawbaugh tell Mrs. Drawbaugh that he had talked down to the lower shop; that was the shop in the lower story of the red house.

Asked on cross-examination whether Mrs. Brenneman did not come to her house and live because Brenneman did not support her, she evaded the question first, and finally said in substance that Mr. Brown, her husband, turned Mrs. Brenneman out of the house for the reason that he thought her husband ought to support her; so

suddenly was she put out that the first night she went away she and her children stayed with a colored woman in the village (p. 169).

Of these three women, the mother destroyed her own testimony. She is presented as one who had no knowledge of Milltown affairs and Milltown talk after 1870. The clock exhibition, which she swears was common talk in Milltown, took place in 1878.

The two daughters are called for little more than hearsay. Witnesses of a better class than either of them are needed to prove telephones during the time of the Faucet Company. They are called to swear what Drawbaugh said and *what Mrs. Drawbaugh said.* Why do they call the serving-maids and not the mistress, unless they like their story the best? Why all this second-hand testimony about Mrs. Drawbaugh, unless her knowledge at first hand would be bad for her husband's assigns? He is not a party to the record.

No. 213. *Jacob M. Peterman*, defts, iii, surbtl, 471. — Age, forty-one years; laborer.

"*Q.* 4. Have you any knowledge of Daniel Drawbaugh's talking machine, and if so, when, where and from whom did you first learn of it?

"*A.* From Mr. William Darr, in the summer some time of 1874, at Mr. Darr's shop, at the west end of the bridge at Eberly's Mills."

As Darr moved away from Eberly's Mills in 1871, and never returned, this was a bad beginning for a witness who had nothing but memory to go by. So the defendants tried to help him by telling him that William Darr left Eberly's Mills in 1870, and asking him if he was the man referred to. But this made matters rather worse. The witness said (p. 472): —

"*A.* 5. That is the Mr. Darr, and we first talked of it — it seems to me — earlier than that; but I paid so little attention, and it is so long ago, that I hardly recollect any more."

After several more attempts to make him understand that his testimony so far had not been what was wanted, he was asked (p. 472): —

"*Q.* 10. Then your recollection is that whilst Mr. Darr lived at Eberly's Mills he spoke to you about Drawbaugh's talking machine: is that correct?

"[*Objected to as leading and as improper, in view of the previous testimony of the witness.*]
"*A.* Yes, sir."

Darr told me that Drawbaugh was inventing a talking machine. We went to the shop to see it, but Drawbaugh was not at home, and I didn't see it that I recollect of. "As near as I can recollect, I think it was in September, 1874," that I was over there and saw it, with John Topley, of Duncannon, now dead. I think Emanuel Dietz was with us. In answer to a leading question, he says that he thinks Darr was not living in Milltown at that time. He and I only talked of it about once. I do not know whether he had a shop in Milltown after he left there. Have not been at Eberly's Mills since then that I remember. In answer to a series of leading questions, he says that this visit with Topley was several years after the conversation with Darr. I think A is the one that Topley and I saw.

A couple of days after I returned home from that visit I was served with protest of a note. I produce it. It is dated Sept. 16, 1874. Mr. Fenn first came to me to testify on Tuesday, the 4th of this month; [deposition was given on the 6th.] At that visit Drawbaugh got to telling me he was inventing a talking machine. I said, "Oh, Dan! I guess it will not amount to much." "Well," he says, "I will have it fixed up and take it to the Centennial, anyhow." That was about all that passed.

September, 1874, was a little early to get ready for the Centennial; but the remark, if made, and whenever made, means that he had not then got one fit to show; this does not look as if four years before that he had one that newspaper advertisements could be transmitted through by unskilled persons. Fourteen months after this date he said to several, and his friend Holsinger published in the newspaper (v. p. 107, *supra*) that Drawbaugh was fixing up a clock to take to the Centennial; clearly no telephone was ready then. This remark if made at this time, taken with the subsequent talk and action about the Centennial, would be proof helpful to the complainants, but doubtless the witness has mixed clock and talking machine in his worthless memory, or else the whole story is pure romance.

The undertaking of this witness to fix the date of his alleged visit with Topley, by reference to "being served with protest of a note," is perfectly absurd. The only association between the two things is that which exists in the mind of the witness, or which he pretends exists there, and no doubt it is one of the examples with which defendants' proofs abound, of a witness, who really has no recollection on the subject of time, as is certainly the case with this man, deceiving himself, or undertaking to deceive others, by an arbitrary and purely fanciful association of the event, or alleged event which he is called to testify, with some other and totally unconnected event, which he happens to be able to fix.

The Emanuel Dietz, with whom the witness thinks he made this alleged visit to Drawbaugh's shop, has been for years, and still is, a resident of Milltown, an immediate neighbor of Drawbaugh's, and the defendants have not called him, although they have made repeated references to what others say they heard him say. It is another case of second-hand stories. (For Dietz and others see John Kahney, complts, iii, 2057, and pp. 9, 466, *supra*.)

No. 142. *Samuel B. Heiges*, defts, iii, surbtl, 95. — This gentleman is principal of the Norman School at Carlisle, Pa., and was formerly instructor in physics at the local academy in York. In 1859 and 1860 he taught school at Eberly's Mills. He had a special class to which he gave instruction by lectures and experiments in physics, especially in electricity and magnetism. Drawbaugh attended these lectures, took a large interest in them, and had a good deal of talk with Mr. Heiges on the subject. Mr. Heiges says that Drawbaugh spoke to him at that time of a clock to be run by a magnetic current from the earth, and of speaking through a telegraphic wire by electricity; that he thought the latter could and would be accomplished. He says that between 1871 and 1874, he visited Drawbaugh's shop with Dr. Mosser; they talked about faucets; they stayed there perhaps an hour, and Prof. Heiges says that finally, just as they were leaving, he saw something which he thinks was instrument C. Drawbaugh said it was a talking ma-

chine, and that he had talked through it and that some other parties had, but he did not talk through it to witness.

Prof. Heiges says that he took it in his hand; that, so far as he remembers, it was in the same condition as now, and now it has no magnet nor electro-magnet upon it; that it had a metal diaphragm; he says he touched the diaphragm and vibrated it with his fingers and then laid it down and walked away. The whole affair lasted not more than five minutes (p. 100): —

"*A.* This is the one that I saw [*taking up instrument 'C.'*]

"*Q.* 35. How long on that occasion did Mr. Drawbaugh talk to you about his talking machine invention?

"*A.* I suppose not more than five minutes; our conversation occurred after Dr. Mosser and he were through.

"*Q.* 36. Did you take the talking machine in your hand at that time or not?

"*A.* I did; I remember I caused the diaphragm to vibrate, just as I do now, by placing my finger against it and pressing it in.

"*Q.* 37. What kind of a diaphragm was on the machine at that time — metal, or wood, or membrane, or what?

"*A.* A metal diaphragm.

"*Q.* 38. Did Mr. Drawbaugh say anything at that time about how the sound of the voice operated the machine? If so, what, so far as you remember?

"*A.* Yes, sir; I remember he said the voice produced pulsations.

"*Q.* 39. Did he or did he not make any reference to the use of a magnet in connection with the machine?

"*A.* Yes, sir; he spoke of applying both magnetism and electricity.

"*Q.* 40. Are you able to say whether there was or was not, at that time, a small electro-magnet, with its poles in close proximity to the armature on the diaphragm?

"*A.* I am not able to say whether there was, or whether there was not."

Afterwards, however, he was able to say. The instrument has now neither permanent magnet nor electro-magnet, and he said: —

"*X Q.* 51. When you saw the instrument 'C' at Mr. Drawbaugh's shop, was it in the same condition it is in now, and if not, what were the differences?

"*A.* As I remember it, it was in the same condition as now, but not so much soiled, and did not have the writing upon it, which I presume has been put upon it by the examiner."

He says that he was then staying with his father-in-law at Shiremanstown, Dr. Mosser being his brother-in-law, and Mr. Henry S. Rupp being another brother-in-law. *He has been in the habit of going to Shiremanstown, which is about three miles from Milltown, every year since, and several times every year.* He has been at Milltown once since — about three years ago, *i. e.*, since this controversy began, — but says that he was not at Drawbaugh's shop; he had been in his shop a year or two before this alleged visit. He says that C was in the same condition then as it is now, that is, dismantled and incapable of use. He says that after telephones came into use he spoke of this alleged incident to others, — once before this litigation began and once since it began (p. 102). No one is called to confirm this, and he does not say what he mentioned, except so far as may be very vaguely guessed from the language of a question (int. 46) which was leading, and objected to as such.

The position of this witness gives his testimony substantial weight, so far as intelligence and disposition to speak the truth is concerned. But even assuming that he is right about his date, it is one of the strongest pieces of proof in the whole record that Drawbaugh did not at that time have an operative speaking telephone. Mr. Heiges was a professor of physics; he was a friend of Drawbaugh and had taken an interest in his ingenuity and taste for electrical experiments; if his testimony is to be believed, he had been told by Drawbaugh that the time would come when we could talk through wire by electricity; he says that he was at Drawbaugh's shop; that an instrument alleged to be a speaking telephone was placed in his hands; but his story shows that something or other in it, or in what was said about it, produced such an effect on him that he did not inquire how electricity would produce such a new and wonderful result. When asked what explanation Drawbaugh gave, he stated as all that was said, "that the voice produced pulsations."

Prof. Heiges did not even refer to electricity in connection with it until such a reference was suggested to him by a question outrageously leading, and objected to as such (int. 39). His answer does not state whether Drawbaugh *had* applied or merely wanted *thereafter* to apply electricity, and the effect produced on Mr. Heiges points to the latter. Whether there was an electro-magnet on the instru-

ment or not made so little impression on him that he at first could not say, and afterwards on cross-examination said in effect that there was not (x-ans. 51). This distinctly points to a string telephone only — for the answer he was led to is not enough to control it. He did not ask specifically how well it talked; he did not ask to have it hitched up and talked through, but passed it by as a man would pass by a useless toy. Time and again he was within a couple of miles of it, and once in the same village; and, although he was visiting for pleasure, never had the curiosity to go and see it.

If it were a string telephone, or if what had been said had impressed him with the idea that Drawbaugh had tried to make an electric telephone and it would not practically work, or if he were mistaken in the date, and the event had happened after telephones had become known, this course of conduct would have been natural, but it is inconsistent with any other state of facts. The record is filled with the testimony of ignorant and unintelligent witnesses. Here was a man who apparently had the intelligence to appreciate and the capacity to understand, together with a friendly disposition and old acquaintance; the best instrument which Drawbaugh, according to his story, had, and which he says was a magneto instrument (C and I) requiring no battery, no adjustment, and no trouble to hitch up and operate, was put into his hands and he laid it down and walked away without seeking for any explanation, without any being given, without any trial of it or offer to try it. Such a man could not so behave in presence of an electric speaking telephone in 1872. These positive facts alone are enough to prove beyond question that, if this visit was at the date alleged, Drawbaugh did not then have an operative electric speaking telephone.

That Prof. Heiges, always within reach, was not called until the surrebuttal is proof that Drawbaugh had no recollection of the alleged incident, while the very vague, unmeaning and incompetent affidavit of Dr. Mosser thrust into the case by the defendants (complts, ii, 1146) shows that he had no recollection of it.

Prof. Heiges's date depends merely upon an effort of memory to associate certain facts with it. Chiefly, that it was while Dr. Mosser lived at Shiremanstown. But Dr. Mosser only moved to the next village, two miles off, and the place of meeting was at the house

of old Mr. Rupp, father-in-law of both. He was in the habit of visiting Shiremanstown several times a year for ten years, and it is much more likely that he should have seen this at a later visit and after 1876, than that he should have behaved as he says he did in presence of such an invention and never gone to see it again.

He puts the incident during the time of the Drawbaugh Manufacturing Company. The proof from the course of conduct of that company and its members, and particularly H. S. Rupp and A. L. Rupp, the two brothers-in-law of Prof. Heiges, is so strong against the existence of any operative speaking telephone at that time, that while Prof. Heiges may confirm it, as we think he does, he cannot weigh as anything against it.

No. 184. *W. Scott Bruckart*, defts, iii, surbtl, 1129. — Age, thirty-six years; physician; Shiremanstown, Cumberland County; practising there since Feb. 3, 1874. Testifies that in March, 1874, he bought, and on April 1, 1874, took possession of the property in Shiremanstown, occupied up to that time by Dr. M. B. Mosser. He was asked no questions about the "talking machine," and presumably therefore is without any knowledge suitable for defendants' purposes on the subject; a fact not without significance, seeing that the witness is a country physician, and consequently must have a pretty extensive circle of acquaintance in the vicinity of Shiremanstown and Milltown.

No. 149. *William H. Zearing*, defts, iii, surbtl, 122. — Farmer; Shiremanstown, Cumberland County. Has known Daniel Drawbaugh for twenty years. Went to Drawbaugh's shop to get a pair of steelyards repaired, — relettered and notches filed; this was the only time had steelyards repaired there. Called again for them in a week or two; charge for the job was thirty-five cents. Fixes time as Nov. 25, 1873, by book entry. Drawbaugh on that day showed witness "the skeleton of a clock, and a motor; and amongst others what he called a talking machine." Drawbaugh had shown witness a talking machine before that, if witness's memory serves him right, several years prior to that; at the time Jacob Carns was working in the shop. [Carns worked there from 1868 until February, 1871.]

Jacob Carns and George and Hiram Drawbaugh were there then. Shortly after met Carns at Shiremanstown, and spoke to him about this talking machine. Witness considered it rather of a humbug, and Carns expressed himself in the same way and did not seem to think it would prove a success. Witness expressed the same opinion to Drawbaugh himself at the time, and Drawbaugh replied that it would prove in the future that it was not a humbug, or words to that effect. Don't know that he can just give his words for it.

Witness further testifies in answer to leading qestions: when Drawbaugh showed him the talking machine on Nov. 25, 1873, he talked to witness by means of it. Witness was in room on third floor. Drawbaugh went out of the room; "supposes" he went down-stairs; heard him going down; witness heard and understood. Part of the conversation which he remembers was, "The steelyards are finished"; "supposed" it to come through the talking machine, as the door was closed; don't think he could have heard Drawbaugh through the air.

Then witness changed his opinion about the thing being a humbug, and thought it probably might be a success instead of a humbug. Told Drawbaugh so, "if his memory serves him right." On this occasion Drawbaugh said he believed he could talk to people in New York City, and even further.

Witness (defendants' usual mode of examination being adopted, and only those instrument alleged to have been produced within the period covered by his testimony being shown to him) indicates B as "looking like" the instrument which he saw on the first occasion (1868 or 1869), and I as "looking like" the one he saw on the second occasion. In reply to a leading question, witness says Drawbaugh showed him the instrument into which he did the talking, before he did the talking, but does not undertake to identify any of the exhibits shown to him as that machine.

P. 128. "*Q.* 44. State whether or not you have ever seen Mr. Drawbaugh's talking machines at his shop since the the twenty-fifth day of November, 1873.

"*A.* It is altogether likely that I have, as I was there a number of times after the 25th.

"*Q.* 45. Have you, or have you not, any distinct recollection of seeing them there since that day?

"*A.* Looking over it, if my memory serves me right, I think I was there in May, 1877; I was there several days after that, anyhow."

Is led to say yes to questions asking whether Drawbaugh's talking machine invention was a thing generally known and talked about in the community, about the time he first saw it (1868 or 1869), and has continued to be so from that time down to the present.

Cross-examined. Says he heard considerably more talk besides "the steelyards are finished," but has no recollection of it particularly; whatever he heard he heard as distinctly as he did about the steelyards; the thing he listened at "was lying on a little table in the room," "if his memory serves him right," "near the centre of the table, if he remembers rightly." When he heard Drawbaugh say, "The steelyards are finished," he was *standing* near the table, quite close; was *sitting* about as close to the table as he could sit; was sitting when Drawbaugh went out; afterwards stood. When he heard "the steelyards are finished," "was standing, if his memory serves him right," beside the table, quite close; "if he remembers right, Drawbaugh spoke the date, that is, month, day and year. While this was going on the machine was lying near the middle of a table."

As to this, it is sufficient to say that the conditions described by witness make the hearing of speech simply a physical impossibility with the telephones in use to-day, much more with such an instrument as defendants' exhibit I. It would be impossible, with the telephones now used, that a person, either standing or sitting near a table, should hear talk through an instrument lying near the middle of that table, and therefore not placed to his ear. The falsity and absurdity of the story are made more palpable by the attempt to give it an air of circumstantiality and particularity of recollection by having the witness repeat some of the words which he declares he heard. The combination of words specified is not of a kind easy to get through a telephone, or such as a listener would be likely to fully understand at the first essay, under the most favorable conditions; that Zearing heard any such combination of words through instrument I, under the conditions he specifies, or, for the matter of that, under any other

conditions stated or likely to have existed at the time and place, is clearly false.

Just at that moment Drawbaugh could not have been quite so badly off for money. The work on the steelyards only cost thirty-five cents, but Drawbaugh was so busy "with other work promised" — paying work therefore — that he told Zearing that he would not do his little job for a week or two, and only as he could make time at night. This is not a mere chance remark by this witness, for our witness, David Hauck, who was making faucets at Drawbaugh's shop during that fall, testifies (complts, i, 792) that he wanted Drawbaugh to work for him either by the day or by the job, and to name his own price, but Drawbaugh would not, saying that "he had some work to do that he had promised to other parties." When Drawbaugh devoted two days of his testimony to his finances, he did not tell the Court how busy he was on paying work, nor tell what his income was from that source in addition to what he received from patents sold and rents collected.

Zearing's testimony that he first saw a talking machine at Drawbaugh's shop at a time when Jacob Carns was working there (in 1868–9), and that Carns and George and Hiram Drawbaugh were there, is to be read in the light of the testimony given by those persons. Carns testified for complainants (complts, ii, 895; p. 440, *supra*), that he neither saw nor heard of any talking machine while working there. The allegation of George Drawbaugh, called by the defendants (defts, i, 624), is that his first knowledge was obtained when painting Sadler's wagon, which was after April 1, 1871 (p. 198, *supra*); he does not pretend to have heard of it before that.

The nature of Zearing's testimony as to what he saw and heard in 1873 is not such as to give weight to his declaration as to what he saw several years previously, in the face of the depositions of Carns and George Drawbaugh.

No. 153. *Jesse Eicholtz*. defts, surbtl, iii, pp. 152, 160; No. 124. *Mrs. Eicholtz*, *ib*. 158. — He alone, and afterwards he and George B. Eyster, hired the Heck Mill on the Conodoguinet Creek for many years. They had some work done at Drawbaugh's shop Nov. 6,

1873. This date he fixes by an entry in his book. On the way home that day "John Teahl rode along with me that day from Teahl's Mill, where he was milling at that time" (ans. 7, p. 153). Says that while there he saw talking machines; talked through them, and understood plainly what was said. Drawbaugh said also that he would get it patented and introduced into use if he had the money or the means, but he had not. He asked whether Eyster and I had any money for the purpose. I said I hadn't, but Eyster could get all the money he wanted, and at his request I asked Eyster about it. "Told him that Drawbaugh told me if he could only get some one to help him he would run it to Harrisburg and convince them, . . . and then he could get plenty of money." I told Eyster to do it. Witness did not identify any machine.

Cross-examined. They were working on faucets at the time. Saw a patent pump and some other articles and a couple of patent clocks; one was all open except the face; the other was a large clock in a case; I think he had three or four different clocks there. He told me that they ran by electricity or magnetism, so that they did not have to be wound up. "I know they didn't run by a spring nor by a weight, because I examined that closely" (p. 156). My wife and I were on the lower story at the talking machine and Drawbaugh was two stories above me. He talked first when the machinery was not running; then he started up the machinery and I heard him plainly both times.

Redirect. Says that they first talked through the machine, and then Drawbaugh said he would start the water wheel and go up and talk to them again, and that they would still hear him, and that they did then still understand perfectly well. On recross, he said that he had told that story to Mr. Jacobs before testifying. Evidently Mr. Jacobs thought it was too absurd to put in.

No. 124. *Mrs. Eicholtz* (defts, iii, 158) then testified that she went with her husband on that occasion to Drawbaugh's shop. He first talked through the talking machine, and think I understood everything, then he started up the wheel, and they understood distinctly the words he spoke through the talking machine; he started the wheel to see whether they could understand him in spite of the noise there. Never at the shop at any other time. Before that it

had been common talk at her husband's mill, and in the house when the men came for their meals, and among strangers coming in, that Drawbaugh had a talking machine. It had been common talk a number of years before that. On cross-examination she said she first heard of it before her husband went down once to Hake's distillery, about 1870 or 1871, and that on that occasion the husband said he would go in and see it.

Jesse Eicholtz, recalled. Then the defendants recalled the husband, and he said he had been there in the summer of 1871, and Drawbaugh showed a talking machine to him and talked through it; he understood distinctly the words that were spoken; he had heard it spoken of at his mill before that; Drawbaugh had spoken to him about it; he went to the shop for the purpose of seeing this by Drawbaugh's invitation. On cross-examination he testified that he had told Mr. Jacobs all about this before he testified the first time. Evidently Mr. Jacobs thought there was something about this visit also which would not help their case. Then the witness adds, at the close of his redirect examination (defts, iii, surbtl, 162): —

"As to that first visit I would say that that first talking machine was entirely different from the second. The first consisted of a tin can and a glass tumbler. They were connected by a string; if I mistake not, *it was a string instead of a wire.* The second was connected by wire. That is my recollection; but it has been so long since that I wouldn't positively swear that it was a string or a wire, but I think it was a string."

Do the defendants want this witness to be believed or to be disbelieved; they must take him as he is and for substantially all he says; and he is their witness.

Now we begin to see why the defendants' counsel was not particularly anxious to have the witness's recollection about the first visit, for, if it is good for anything, it proves specifically a string telephone. *After* this and for the first time the defendants, in their usual leading way, put before him B, C, F and I, and asked whether he saw any of these at Drawbaugh's shop in his 1871 visit. He says (ans. 17, p. 162) that he saw something like F and B the first time, saw the tumbler both times; remembers something like C, with a horseshoe magnet; it runs in his mind that there was something in the shape of a jar, like I, but he does not remember which instru-

ment he listened at in 1871. He was not asked and did not pretend to say what he listened at in 1873. Plainly, the fact is that the defendants did not place any confidence in this man's recollection as a whole. They were quite right in that. But they were hardly fair to the Court in presenting a part of the man's recollection and not the rest. With how many other witnesses have they done this?

He testified on direct examination in his first deposition that at the time of the visit when he says he saw a talking machine, and which he says was in November, 1873, "John Teahl rode along with me that day from Teahl's mill, where he was milling at the time." Teahl sold this mill to Etter & Shanklin, Feb. 6, 1871, and moved away from the place entirely by March 1, 1871. We proved this by our witness, No. 137, Calvin Etter, complts, iii, 2074, who produced the deed and his account books.

It is, of course, absolutely impossible that this witness or any one heard distinctly and plainly through F and B in 1871; and it is, if anything, still more impossible that he could have heard and understood with C and I, or with any combination formed out of F, B, C and I, operated in the machine shop, with the machinery running. A string telephone from one part of a small building to another would accomplish such a result.

The witness's story of the clocks, while it is not perhaps entirely clear, still states that there were two clocks at least which did not run by spring nor by a weight, and that one of them was a large clock in a case, and that the other was not fully closed. No such thing existed there until 1876 or 1877. All this, together with his bad power of association shown in the case of Teahl, and the fact that his story of results is absolutely untrue, pushes his visit over until a date after our patent, or else shows that the whole thing is the result of imagination.

Drawbaugh's statement to him was in substance that a trial of his apparatus on a real line would at once convince everybody so thoroughly that he could get plenty of money. Of course it would, — if it worked. Why did he not try it on a real line? During 1873 and the next year he was visiting, from time to time, Mr. Kiefer and Mr. Wilson, the telegraph superintendents, who had plenty of long and short lines at their disposal, and would have

tried it at once (see pp. 426–432, *supra*). His friend Mr. Stees had a mile or two of private line on which he could have tried it at any time, and was wishing just such a thing as that (see p. 414, *supra*). During the next year he got a chance to try an electrical instrument on a real line by permission of the telegraph operator at Mechanicsburg, and what he then carried him was not a telephone, but his magneto key (p. 432, *supra*); and in the following summer — 1874 — he advertised a list of all his inventions and did not put the telephone in it (pp. 106, 346). Plainly Eicholtz is only an example of how witnesses, apparently not intending to commit deliberate perjury, can be brought to testify for the defence in this case to a proved untruth.

No. 284. *George B. Eyster*, defts, iii, surbtl, 890. — Sheriff; residence, Carlisle, Pa. Produced to confirm the testimony of Eicholtz, that he had mentioned the talking machine to Eyster. That testimony was recited to witness, under objection that such a mode of examination is leading, and in response he testifies that he has a recollection of the alleged conversation with Eicholtz; but it appears to have made no impression on him. He does not undertake to fix the time. He does not in any way help to fix the date, because it does not appear when they ceased to be partners nor when either of them left the mill.

Eyster further testifies that before this conversation with Eicholtz he had often heard of Drawbaugh's talking machine; says that he first heard of it on the occasion of a visit to Mr. George B. Heck at Milltown or Eberly's Mills. Says that he and Heck (now dead) went to Drawbaugh's shop, looked around there, and after they went out got talking over the inventions of Drawbaugh; saw no talking machine; Mr. Heck is said to have said that witness did not see all Drawbaugh's inventions; that he was working at one that he did not show to every one, — didn't want every one to see it; witness says that he asked him then what it was, and Heck is said to have said that it was a talking machine. This from Eyster's reminiscences is certainly rather singular in view of the claim made for Drawbaugh in other portions of the testimony, that he was continually talking about and exhibiting his talking machine to any chance visitors.

No. 159. *Jacob Kimmel*, defts, iii, surbtl, 178. — One of the complainants' witnesses was Samuel F. Hauck (complts, ii, 1160; p. 457, *supra*), cousin of David Hauck, and member of the copartnership that bought out the Drawbaugh Manufacturing Company, and afterwards carried on the faucet business in Drawbaugh's shop from 1873 to 1876 or 1877. Hauck testified that he had not seen any talking machines at Drawbaugh's shop. His opportunities were such (see especially p. 457, *supra*) that he could hardly have failed to have done so if they had been as plentiful as has been alleged. No attempt was made in surrebuttal to show that he saw any at any time material to this case, that is, before Mr. Bell's patent, but witnesses are called to say that he saw a talking machine there in or about 1877.

Although the cross-examining counsel had the assistance of Mr. Drawbaugh, no question was put to the witness showing any knowledge on the part of Mr. Drawbaugh of any particular occasion when instruments were shown to the witness. Some days afterwards the defendants asked that he might be recalled for further cross-examination, and this was done (complts, iii, 1180). Defendants' counsel then said to him that he was informed from Urich and Kimmel that on one occasion he, Samuel F. Hauck, went with Urich to Drawbaugh's shop, and there met Kimmel, and that Drawbaugh then showed all three of them some electric speaking telephones, including A, B, D and E. The witness, Hauck, denied explicitly that such a meeting had taken place, or that he had seen telephones at Drawbaugh's shop in the presence of Urich and Kimmel. On re-examination he testified that he was there once when Kimmel and McIlhenney were there and saw Drawbaugh's fire alarm.

Hauck had given a deposition in the faucet interference matter in June, 1879, and in that he was cross-examined by Drawbaugh's counsel, Mr. Jacobs, as to his visits to the shop. They were, of course, at that time, quite fresh in his recollection, and it appeared from the testimony he then gave, that in January, 1879, he met Mr. Kimmel at the shop and he thought that McIlhenney was with him. He reaffirms this and states that he never met Mr. Kimmel, so far as he can remember, on any occasion except the one that he and McIl-

nenney were there in 1879. He further testified that after his first deposition, but before he had any idea he was to be recalled, he met Kimmel, and, speaking of his visit to Philadelphia to testify, asked him if he, Kimmel, had ever seen any telephones there, and Mr. Kimmel replied that he had never been to the shop until 1876 or later; that he remembered Samuel F. Hauck being there at a time when Kimmel and McIlhenney were there, and that the fire alarm was shown, but that he did not remember of any telephones then, and that the electric clock was the most talked about. He then, upon cross-examination, described fully the arrangement of the fire alarm and its wires.

Jacob Kimmel is now called by the defendants to say that Hauck saw telephones there *after* the date of the Bell patent. The substance of this is stated in the abstract of Hauck's deposition (p. 459, *supra*). The details are as follows: —

Kimmel first testified that he remembered the visit of January, 1879, and the presence of the persons as stated by Mr. Hauck. He does not say and is not asked anything about the exhibition of the fire alarm or talk about the clocks. He then states that he was present at Drawbaugh's shop at another time with Samuel F. Hauck and David A. Uhrich. He is asked, "Can you give us any idea how long ago this was or what year it was?" and answered, "I can't exactly; I think it was in 1877, to the best of my knowledge; I cannot tell positively, though, so far as the date is concerned." And then he states, in answer to a leading question, that this visit when Uhrich was present was not the same as the visit when McIlhenney was present; that at the date of the visit when Uhrich was present Drawbaugh showed them an instrument; that the witness didn't know whether he called it a talking machine or a telephone; that S. F. Hauck saw it; that there was a conversation about it, or rather Drawbaugh was explaining the thing in the presence of the three. Witness says, in answer to a leading question, that he thinks Drawbaugh took it apart, and showed them the inside; and then follows this (defts, iii, surbtl, 181): —

"*Q.* 14. Do you remember anything that Mr. Samuel F. Hauck and Mr. Drawbaugh said to each other on that occasion when you

and Mr. Hauck were present with them? If so, please state what it was.

"*A.* Mr. Hauck had asked Mr. Drawbaugh for a telephone or talking machine to take along home to put up — whether at his house or at his place of business, I don't know — *and Mr. Drawbaugh said he didn't have any.*"

Then the witness is asked whether at that time he had ever heard of speaking telephones being in public use in this country; he says he never had, to the best of his knowledge. On cross-examination he is asked to state what else took place during the visit, and he says that the visit lasted between one and four hours, but he cannot remember anything else that took place; that it was a very cold day. "That is, I rather think I wasn't there so long that day, as it was cold." Then he adds: "I hardly remember whether it was that day it was so cold or the day that I met Davy Hauck and Sam there (which was in 1879); one of those days was very cold, and the snow was drifted badly, and I didn't stay long."

It is evident from this that the witness has got these two visits, which are several years apart, confounded, so that he cannnot tell at which of them the snow storm and drifts occurred, and he cannot remember anything except the particular matter he is called to swear to in chief. Whatever his memory may be worth as to dates or persons, it is significant as to circumstances, that upon this, the only occasion when it is pretended that anybody asked Mr. Drawbaugh to furnish a talking machine for practical use, — and the request is said to have been made by a man of substantial means, with whom Drawbaugh had had dealings, and whom he had long known, — Drawbaugh's answer was, he didn't have any. This is the testimony of their own witness.

The defendants then called

No. 165. *David A. Uhrich*, defts, iii, surbtl, 219. — He says that Samuel F. Hauck and he went together to Drawbaugh's shop and found Kimmel there; "it was about 1876, as near as I can remember"; says that he does not remember that any one else was present; that Drawbaugh showed the party something which the witness says was a speaking machine, but does not remember what Mr. Drawbaugh called it, and that Samuel Hauck talked to Mr.

Drawbaugh about them, and that the instruments he saw were something like A and B. (Kimmel did not pretend to identify any instruments.) The witness says that he did not see Mr. Drawbaugh's clock at the time he was there, though he went all through the shop; he cannot remember anything else that he saw except this talking machine.

On cross-examination the witness's memory appears to be perfectly worthless. He testifies to an interview with Samuel Hauck the last winter, and to the text of the reported conversation, but has not the least idea of what part of the winter it was in; does not remember that anybody else spoke to him last winter on the subject except Samuel Hauck and Mr. Kimmel, and yet the defendants' counsel in cross-examining Hauck last winter stated that he had information from Mr. Uhrich, — evidently obtained between the first examination of Hauck and his recall (complts, iii, 1181). The answer of Uhrich either shows that he tells falsehoods, or that his memory is worthless as to conversations only a year back, though he is called to testify to a conversation eight years ago. He finally remembers that he has talked about this matter with Chellis, Drawbaugh and others; evidently that was the time when, between the two examinations of Hauck, they went to him for the information which the defendants' counsel stated in the passage just referred to. The witness has not the slightest idea when this was, — whether it was a long or a short time before his conversation with Mr. Hauck on the subject; in fact, it must have been within the same week. He says that Drawbaugh and others came to his house to see him and talk to him; that they showed him the instruments A, B, D and E, which are on the table. He didn't remember whether they asked him to make an affidavit or sign a written statement. It then appears by the certificate of the examiner that it is impossible that the witness when interviewed by Chellis and Drawbaugh could have seen the instruments, for they were in the examiner's custody and not out of his hands, and were, in fact, in Philadelphia, and yet this witness swears to seeing these instruments at that time, only a year before he testified, just as positively as he swore to seeing them at Drawbaugh's shop eight years before he testified. He then adds that when he and Hauck went down to Drawbaugh's shop, which was in

1876, Hauck told him that he had business with Drawbaugh; that he went there in order to engage Drawbaugh to go to Mechanicsburg to make faucets; the fact is that Drawbaugh never made a faucet in Mechanicsburg, but he moved there in the spring of 1876 and was actually living there at the time alleged for the visit.

Mr. Kimmel, although he testifies that he saw the instrument, and saw one opened, is not asked to identify the instrument which he then saw. Mr. Uhrich asserts the instruments A and D, but says nothing about their having been opened and examined. D and E were both in existence at that time according to the story of other witnesses, and there would have been no occasion for exhibiting A. There is another circumstance to be noted which Mr. Kimmel testifies to and which Mr. Uhrich does not, and that is that Mr. Hauck wanted "a telephone or talking machine to take along home to put up," and that Mr. Drawbaugh said he had not any. The extraordinary aspect of this story is that Mr. Hauck was the first man of the hundreds who are alleged to have seen the instrument during a period of about ten years who had wanted the instruments to use; and that Mr. Drawbaugh, who, it is pretended, had been in agony for years to bring his invention into public notice, should not take advantage of this opportunity to interest an intelligent man of means with whom he was then on excellent terms, but should reply that he had not got any instruments, and should not offer to make a pair like D and E, which he could certainly have done within two days, and at an expense probably not exceeding two dollars. Such conduct can be accounted for only upon the supposition that he did not believe the instruments would work, or else the whole story of these witnesses, professing to rest merely on memory, is the result of imagination.

No. 161. *Elias Graybill*, defts, iii, surbtl, 184. — Age, sixty-nine years; day laborer; formerly a partner in the firm of Zacharias & Co., and had charge of the warehouse at Whitehill Station, which his firm hired from Jackson Free. That is a mile from Drawbaugh's shop, and is the station used by the inhabitants of Milltown. He went into the firm in the spring of 1869, and then took charge of that particular warehouse, — the firm had several in different places. He says that in the last year he was there, — in the forepart of the

summer of 1875, — Drawbaugh came to the warehouse one day. In answer to leading questions, he says that Drawbaugh then asked him to put some money into his talking machine invention, and said that if he had $150 he could get it patented.

P. 186. "*Q.* 17. Did he tell you what he wanted the money for?

"*A.* To get the *telephone*, as he called it *then*, patented."

Note the careful distinction which the defendants have made, and which their witnesses swear was made, — viz., that Drawbaugh never used the phrase "telephone" until he learned it from the publications which ensued upon Mr. Bell's description of the instrument and use of that word in connection with it; that he had always called it a talking machine up to some time late in 1876; yet this witness says expressly that Drawbaugh called it a telephone at the time of the application to him for money. (For some proof about the use of the word, see p. 577, *supra.*)

One hundred and fifty dollars is to be taken as the measure of his wants for a patent.

The witness continues in answer to leading questions: Drawbaugh had a machine with him; showed it to me; said it would transmit news by a wire attached to it; said it would take the place of telegraph wires; didn't show how it was to be used.

Witness was first asked: Did he show you how the instrument was to be used? and he replied, No, not to my recollection. Finally he was asked the grossly leading question, Did he put it to his mouth during that visit, or not? And then he took the hint and said he did; he held it up to his mouth to show me. He thinks that the instrument A looks most like it, but he thinks that the one shown him was more square. No square instrument existed then. He was inclined to put in the $150, and dramatically states that he put his hand in his pocket and then concluded not to do it. He further says that if he had not money enough in his pocket, he had in the bank, but that after his firm failed in the early part of 1876 he had no money in bank and very little in his pocket. This, of course, is intended to negative any inference that the occurrence related by witness would have happened after the early part of 1876. But note the witness's very distinct statement, already referred to, that Draw-

baugh, upon the occasion, called the instrument a "telephone," which he could not have done earlier than late in 1876.

Witness further says that shortly after this occurrence, but he thinks before the failure of his firm, he was in Drawbaugh's shop one day and Mr. Drawbaugh talked through the machine to him and whistled through it and he heard and understood what was said; but all this is in answer to leading questions which constitute a series of propositions and ask his assent to them. He has no means of fixing this date, and the visit and exhibition (if it ever occurred) did not tempt him to put in his $150 of ready cash.

Witness is examined as to some alleged interviews with Mr. John C. Comfort, and he testifies that in August, 1872, he went with Mr. Comfort to see one of the complainants' lawyers at the Bolton House in Harrisburg, and in the fall of 1882 he had a conversation on the same subject with Mr. Comfort when he met him at the railroad station at Whitehill. He gave the significant answer that he told Mr. Comfort then of this alleged request for aid from Drawbaugh (p. 189): —

"*Q.* 43. What did Mr. Comfort say when you told him this?
"*A.* He said that he could get men to swear that there was no telephone before that time; I told him that that was an easy matter, because *a great many people never heard of it.*"

How does this agree with the defendants' theory that the matter was universally known, and that everybody had heard of it? The period this witness refers to was 1875.

Upon cross-examination he proves to be an old man, broken down by sickness and misfortune, with a memory that is perfectly worthless. He begins by saying (p. 193) that his memory is "not quite so sharp" as it was years ago; that he thinks he was in Mr. Drawbaugh's shop early in the spring of the present year, but cannot tell; and he cannot tell when he was in before that, though he has been in several times, and he cannot tell how often he has been there since the talk about the talking machine as he states, but he thinks it was twice within two years before testifying. Then he attempts to fix the time when these later visits were made; says that he saw Mr. Drawbaugh there on the first of these two visits, but he is not sure about the second. Then he immediately says that he

saw Drawbaugh at work, and states what he was at work on, and says that they talked about talking machines the second time.

He then says that when he talked through the talking machine at Drawbaugh's in 1875, he thinks the machine he listened at was screwed up against the wall. No receiver is pretended to have existed at that time, which was or could be screwed up against the wall. Then he says that of his two visits in the last two years (cross-ans. 103, p. 195) he saw George Drawbaugh and Mr. Heiges at the second one. And in the one hundred and twentieth answer he says that he saw George W. Drawbaugh at the first visit.

His testimony in chief as to the visits to the complainants' counsel was of only one visit at the Bolton House in August, 1882; upon being cross-examined about it he begins by stating that he did not remember whether the statements which in his direct examination he said he made to counsel at the Bolton House in August, 1882, were made then or at a subsequent visit at the United States Hotel. Then he says that the visit at the United States Hotel was in August, 1882, and that there was still another visit at the United States Hotel, which might have been two months, or not so long, or probably longer, after the first; cannot tell whether it was two, six months, or what. Then he added that he could not tell at which of the two visits or at which of the hotels he told counsel, as he alleges, about Drawbaugh's talking machine. Then he admits in terms that he did not say anything to counsel about Drawbaugh's asking him to help him, or about his ever having seen the instrument at Drawbaugh's shop or talked through it (the question being read to him twice by respondents' counsel); and he admits that at one of these interviews he told the complainants' counsel that his troubles and the failure of his firm and his long fever had troubled his memory very much, but he naively adds, with the self-delusion which always accompanies a broken mind, that he has got over all that trouble; he is seventy years of age. His testimony is (defts, iii, surbtl, 200): —

"*X Q.* 159. And you told me that your troubles after the failure of your firm, and your sickness, had troubled your memory very much, didn't you?

"*A.* I might have told him so, but that has not impaired it to this day; I have got over that trouble now — weathered it through. I can remember anything now as well as I ever could."

After an adjournment he, on redirect examination, tried to creep out of his cross-examination by saying, first, that he did not understand one of the questions that was put to him, and then that his answer to it was not understood, and then that he did not mean to have a conflict between his cross and direct examination, although nobody had prompted him to be ready to make this explanation. He had testified that when he went to the Bolton House he saw lawyers, — in the plural, — and repeated this several times. On further cross-examination he says he cannot remember of there being more than one, and he thinks there was only one. In short, throughout the whole deposition of this witness, it is apparent that his mind and memory are worthless; either he cannot remember anything or cannot state it twice alike, or admits that he remembers wrong everything that is touched upon outside of the particular fact that he is called to swear to. This witness has lived near to the claimant and been a visitor to his shop while the case was going on. They did not call him in chief, and Drawbaugh being asked who he had applied to for aid (defts, ii, 936), does not name him; yet the facts he swears to, if true, would have made him one of their most important witnesses.

We have already shown the falsity of Drawbaugh's sworn statements about his alleged payments to Natcher and to Zacharias and Graybill (v. p. 492, *supra*). This proof was put in before the surrebuttal began. In surrebuttal the defendants called both Natcher and Graybill, but did not refer to this matter. They know that the facts we proved can neither be denied nor explained away. The date of the copartnership of Zacharias & Graybill they expressly confirm.

In connection with, and by way of contrast to, this testimony of Graybill, is to be read that of

No. 160. *Jackson Free*, defts, iii, subtl, 182. — This witness has lived at White Hill Station and owned a warehouse there ever since the spring of 1866. The place is about a mile from Drawbaugh's

shop, and is the railroad station for the inhabitants of Milltown. He is called merely to fix the date when the firm of Zacharias & Graybill hired a warehouse from him and when they broke up business and disposed of their property. His position is such that he must have known of everything that was common talk in the neighborhood, and it is hardly possible to doubt that if Drawbaugh had had an operative speaking telephone at his shop this man would have known of it and seen it. He is the owner of a warehouse and therefore a man of means whom Drawbaugh would have gone to if he had had anything which he thought was worth asking aid for; but no question is put to the witness as to the telephone. Considering that witnesses from a long distance were brought simply to state that they heard it talked of, the failure to ask this witness any question on the subject must be taken as perfect proof that he is unable to swear that he ever so much as heard of it even at any time.

No. 163. *John F. Lee*, defts, iii, surbtl, 211. — Already testified for defendants merely to fix a date (defts, i, 632). He is now called in order to enable the defendants to try to introduce the *ex-parte* affidavit of Jacob Sadler, who is dead, purporting to be sworn to before a justice of the peace. The defendants took this paper on the 30th of June, 1880. They had occasion when the motion for preliminary injunction in this case came up, to use any affidavits that were of any value. They did not file this or any of the same character, and now, Sadler having died, they undertake to force it upon the record. They called this justice of the peace, whose name is signed to the jurat, and he does not put the affidavit in a very favorable light even if it were competent, and could be looked at by the Court for any purpose whatsoever. The body of the affidavit is in the handwriting of Mr. Jacobs, one of the counsel for the defendants, and a party largely interested. They attempted to get the witness to swear that it was written down by Mr. Jacobs from statements made by Mr. Sadler in his presence, and Mr. Lee says in substance that this was *not* the fact. It appears further that there were two meetings, and the witness says (p. 212): —

"*A.* 7. My recollection is that there was some trouble about Sadler's recollection of the dates, and they agreed to let the matter rest until he had time to hunt it up."

The affidavit does not leave the defendants' case in a very good condition, so far as the transactions with Jacob M. Sadler are concerned. It is very brief, very vague and very indefinite and uncertain, and does not describe or identify any instrument. If the instruments the witness referred to were F and B, his affidavit is unequivocally false, for it is impossible that speech can be transmitted fairly and intelligibly by these instruments, and C and I are hardly better.

Again, they have denied the dates stated in this affidavit, although it appears to have been made, according to Mr. Lee, after examination. The affidavit states that it was in 1871 that Jacob M. Sadler and Drawbaugh were engaged in the manufacture and sale of hydraulic rams. This is true. But they discredited Sadler in putting in their own case, for, having in their hands this affidavit, which stated the partnership to be in 1871, they deliberately put in a deposition from George Drawbaugh, supported by what appears on its face to be strong testimony from Mr. Lee and his books, showing that it was in 1870. That testimony is untrue, as has already been shown, under the head of George Drawbaugh's deposition (No. 198–200, *supra*). Was this mere reckless wantonness, as much of their proof seems to denote, or did they think that the earlier date was better for them? How much more of their record is disproved by papers in their hands?

Lee has lived for more than a dozen years in the next village to Drawbaugh; was the partner of Baylor (*q. v.* p. 44, *supra*); was partner of Christian Eberly; brother of B. Frank Lee; has repeatedly employed Drawbaugh to repair the engine of his lumber mill, and has had dealings with him; apparently a man of some standing and means. If there was a talking machine at Drawbaugh's, and both of Lee's partners and his brother knew of it, Lee would have known of it. In their surrebuttal the defendants have called witness after witness merely to swear that they heard reports that there was such a thing; they have had Lee twice on the stand and have not asked him a word about telephones. If the claimant's true story is the story which they want the Court to believe and must make the Court believe, in order to prevail, the record could not present such an instance of ignorance on the part of one situated like Lee.

No. 181. *H. L. Hamme*, defts, iii, surbtl, 322.

No. 182. *Geo. Frederick*, defts, iii, surbtl, 328.

No. 183. *Jonathan Fry*, defts, iii, surbtl, 331.

These three witnesses testify concerning a visit which they say they jointly made to Drawbaugh's early in 1876. There is of course no possibility of getting any evidence to directly contradict or control their statements of what they saw. They must be judged by their own inherent credibility and by the inconsistency of the story of which they are a part with the whole life and course of conduct of the claimant. Their part, as told by Hamme, is that they went there and he became interested and talked through the machine, while it appears that Frederick and Fry took no interest whatever in the matter and did not talk through the machine; do not pretend to identify it or to know anything about it.

Frederick speaks of it in this way (p. 330): —

"*A.* 14. We came in there and looked around, and seen the clock and fire alarm, and he showed us a machine he called a talking machine, and I just took a sly glance at it; and he and Mr. Hamme was talking very much about it, — seemed interested in it in conversation. I heard Mr. Hamme say it would lay all telegraphing in the shade."

That is all the attention this witness paid to it.

Jonathan Fry paid still less attention to it; he says (p. 332): —

"While we were in there he got something, and he called it a talking machine. I didn't pay no attention to it much; I went there to see the clock."

Hamme, who noticed it the most, cannot identify it. It is very striking that Jonathan Fry, who has lived for a dozen years within half a mile or so of Drawbaugh's shop, cannot pretend to say that he ever saw a talking machine or talked through it, or heard it spoken of in the neighborhood, or has any knowledge on the subject, except that in the beginning of 1876, he saw something which he heard was a talking machine, shown to somebody else, and he paid no attention to it. The fact that that is the best knowledge which one of Mr. Drawbaugh's neighbors has of it, shows that he did not have and was not believed by his neighbors to have a practically operative instrument, up to that time, at least.

Fry expressly testifies (ans. 5, p. 332) that the first time he saw or knew anything about Drawbaugh's machine that he can definitely fix, was in the beginning of 1876, and from the course of examination on the rebuttal, it is perfectly obvious that if he had ever heard of it, or believed he had ever heard of it before that, the question would have been asked him. They called witnesses from a distance merely to swear that they had heard it talked of very early; this neighbor cannot support that story or he would have been asked; and so his silence disproves it.

Hamme says (p. 523): —

"*Q.* 17. While you were there in his shop that day, did he, or did he not, show you any machines which he called talking machines?

"[*Objected to as new matter, not in rebuttal. This objection to apply to all succeeding questions upon the same line of inquiry.*]

"*A.* Yes, sir.

"*Q.* 18. Tell us whether he did or did not talk to you through said machines while you were there that day.

"*A.* He did talk through the machines to me.

"*Q.* 19. While he was talking through the machines to you, and you were listening, in what part of the shop was he talking and in what part were you listening?

"*A.* He was in the room to the right-hand side as you go in — a small room. I was in the back part of the shop — the far end from him — in what I would call the big shop. It was partitioned off in three parts at that time — the shop.

"*Q.* 20. While he was talking into the machine in the small room, and you were listening at the machine at the opposite end of the shop, was the door closed or open?

"*A.* It was ajar; I couldn't tell whether it was an inch open; it might be three inches open.

"*Q.* 21. While he was talking through the machine in the small room, and you were listening at the machine at the opposite end of the building, tell us whether you did or did not hear and understand, through the instrument, what he was saying?

"*A.* I did understand it very plainly — what he was talking to me.

"*Q.* 22. Tell us how he talked through the machine — whether he whispered, or talked aloud, or sang, or what.

"*A.* He talked in a whisper.

"*Q.* 23. After you had heard him talking through the machine, and understood what he said through it, tell us whether or not you went back to the small room and had any conversation with him about the invention.

"[*Objected to as leading.*]

"*A.* I went back in the small room and I said to him, 'This lays away over the deck of telegraphing,' or 'This will do away with telegraphing'; I don't mind any more which, but one of them two words I said.

"*Q.* 24. What further was said?

"*A.* I asked him then, 'How is this thing done?' he said, 'This is done by electricity.'

"*Q.* 25. I now show you a machine, Exhibit B, and ask you whether the machine which you listened at that day was this machine or looked like this machine, or not?

"[*Objected to as leading.*]

"*A.* I couldn't tell that. I couldn't tell which machine it was; I couldn't distinguish none of them here, that I would swear to that I had in my hand at that time.

"[*The machines here on the table, and which the witness refers to in his last answer, are A, B, C, D, E, F, G, L, M, I, and O.*]

"*Q.* 26. If I understand you correctly in your last answer, you mean that you are not able to say whether the machine which you had in your hand that day was one of the machines now on the table or not?

"[*Objected to as leading.*]

"*A.* I couldn't answer that. The machine might be here on the able and I not know it. I don't know whether I had one of these machines in my hand or not. I don't know. I wouldn't take my oath whether it was one of those or not.

"*Q.* 27. How did you listen at the machine that day; did you take the machine in your hand and hold it up to your ear, or did you bend your head down to a machine lying on a table or bench?

"[*Objected to as leading.*]

"*A.* I held it up to my ear."

"*X Q.* 33. Referring to your visit to Mr. Drawbaugh's shop, regarding which you have testified in chief, please tell us about how long you were in the establishment on that occasion, and all that you remember to have seen or done on the occasion outside of this matter of the talking machine.

"*A.* I might have been in an hour, as near as I can tell. I might have been an hour. He showed me a clock that he was working on to take to the Centennial that fall. He showed me a fire alarm that he had in that place there, which, at a certain temperature, would ring a bell; I remember that yet. I seen the turning lathe there, and machinery that he had there to do work with. I was taking a look all over the shop."

"*X Q.* 38. Then, if I now understand you, you found the machine in what you call the front shop, and you carried it in your

hand to the rear end of what you call the back shop: is that the case?

"*A.* Yes, sir; he handed it to me and I went out — just as if I was going out that door there — and went from the front shop to the back shop; and then he talked; the door was ajar — probably from an inch to three inches.

"*X Q.* 39. Then, if I understand you, while you carried the machine at which you listened from the front shop to the rear end of the back shop, Mr. Drawbaugh stayed in the front shop: is that correct?

"Yes, sir."

He cannot identify, nor pretend to identify, any instrument whatever. Now that is very material, for, if he tried B and F, or C and I, it is perfectly certain that he did not understand what was said through them, for the reason that it is impossible to do so. But it is very significant that the only instrument which he was specifically *asked* to identify (int. 25, p. 324) was instrument B, and one can hardly doubt that upon the preliminary examination by the defendants' counsel he had manifested a disposition to identify that instrument as the one listened at, but when he got on the stand could not even come up to that. If in February, 1876, B was the instrument which Drawbaugh showed to a man and attempted to talk through, of course that fact is fatal to his story and to his case. The description given by Hamme of the way in which the instruments were tried shows that if that description be true he could not have told whether speech came through the instrument or not. He says (x 38, p. 327) that the machine was in one room and he took it and carried it in his hand through the door to the next room, leaving the door ajar; the two instruments were connected by either a wire or a cord, he could not tell which. So far it implies nothing more than a lover's telegraph, though the witness afterwards said that Drawbaugh told him "it was done by electricity." But with the receiver and transmitter separated only by something less than the length of the shop, it is impossible for any but the most trained and accomplished ear to tell whether the sounds heard by the listener come through the instrument or through the air, for the spoken voice coming through the air the length of Drawbaugh's workshop, cut off only by a door open several inches, is much louder than the sound that comes through any telephone instrument which he

pretends to have made before the date of the Bell patent, — unless they operated as circuit-breakers, and then there would be no articulation.

The Court will observe that every attempt upon cross-examination to test the memory of this witness when not directed by leading questions, was deliberately prevented by respondents' counsel in opposing instructive objections enunciated in the hearing of the witness; the whole deposition should be disbelieved for that reason.

He testifies: "Drawbaugh showed me a clock that he was working on to take to the Centennial that fall." (Ans. 33, p. 326; compare p. 621, *supra*, and p. 663, *infra*.)

In the fall of 1880 or beginning of 1881 defendants examined Fry privately, took an affidavit (p. 335), and neither called him nor Hamme nor Frederick. In view of the growth of the testimony proved in the case of A. Kahney and others, this makes the late production of Fry, Hamme and Frederick very suspicious, and their testimony worthless.

Fry was asked one or two questions (p. 331) with a view to having him contradict the complainants' witness, Benjamin Kauffman, but he is only able to say in answer to them that he does not remember whether he did or did not have the conversation with Mr. Kauffman which Mr. Kauffman testifies to.

No. 186. *Wilson C. Fox*, defts, iii, surbtl, 342. — Fox undertakes to swear that in 1867 or 1868 he was in Drawbaugh's shop and by accident saw something and asked what it was; Drawbaugh evaded the answer, and afterwards said it was a new talking machine he was inventing,— perfecting or inventing; that he could talk through it up to his house; that when it was perfected there would be no trouble to connect one point to another; he told all about what his anticipations were; that this conversation was strictly confidential; and, the witness adds, "I never mentioned it from that day to this," and (ans. 17, p. 344) "I haven't thought of the interview from that day to this." Urged by leading questions to describe the instrument, he can do very little towards it, and his description, so far as he gives any, does not accord with any instrument produced.

It seems to be a story too absurd for belief, that this man saw the

talking machine in 1867, never mentioned it and apparently never heard it mentioned by any one else, from that day to this, never thought of it from that day to this, in spite of the notoriety which the invention of the telephone received and the attention it attracted in 1876 and subsequently; and this becomes still more absurd, when it is found that he has a sister and her husband living alongside of Drawbaugh in Eberly's Mills, three miles from Harrisburg, meeting them of course more or less, and yet he never spoke with them on the subject, and never heard them speak on the subject. Calvin Hart, or "Cal. Hart," his brother-in-law, and his sister, Mrs. Cal. Hart, are names which figure very often in this testimony; and yet they are not called to testify, while the brother-in-law tells this extraordinary story.

Daniel Hart, the father of Cal. Hart, was called by us as a witness, and testified explicitly that he had never known of the alleged talking machine.

The witness, Fox, attempts to support his story by saying that when he was employed in the cotton mill at Harrisburg, Mr. Drawbaugh came there to buy thread to wrap insulated wire with, and he told him that he wanted it to use for the telephone. The witness becomes somewhat mixed up in his description, but the absurd part of it is that when Drawbaugh was making a great many electric instruments, clocks, telegraph keys and various contrivances requiring insulated wire, this witness should have got it now into his mind that the telephone was the only thing that he was wanting it for.

This is evidently a case where a vague and worthless recollection of something or other has been brought up into an overpowering belief that what he heard of was the telephone, and that that is all he heard of.

No. 188. *Henry Otstot*, defts, iii, surbtl, 360. — Age, forty-eight years; blacksmith. Says that he visited Drawbaugh's shop at Eberly's Mills about 1873, at the time of the sale of the effects of George Heck, deceased, and that that was the last time he was ever there; that he was once there before that in 1870 or 1871; the first time he was at Drawbaugh's shop, he says he went with John H. Stephens, and saw some machine and asked Drawbaugh what it was,

and was told that it was a talking machine; that he and Stephens went to Drawbaugh's shop that day to get Stephens's water ram repaired; the ram had been put in for Stephens by Drawbaugh; says that the instrument which he saw was C, but counsel who examined him carefully guarded against his recognizing any later instruments by not showing him all that had been put into the case, only bringing out those which, according to their prearranged schedule, they were willing to have him say were there in 1873.

This testimony about the alleged visit with Stephens must be compared with the testimony of the complainants' witness, George Row (complts, ii, 1533, p. 478, *supra*), and with the testimony of Stephens (defts, i, 259, p. 76, *supra*). Stephens does not pretend that any one was with him. He also says that he saw Exhibit C, but thinks it was after 1875, while Row testifies in substance that Stephens mentioned the existence of a talking machine at Drawbaugh's shop, apparently as a piece of news, in 1876. It is not pretended that Otstot was the "hireling" referred to by Stephens; he did not work for Stephens.

No. 190. *George Hosler*, defts, iii, surbtl, 367. — Age, thirty-eight years; Siddonsburg, York County; shoemaker and road supervisor. Has lived there all his life, except that from March 5, 1872, to March 25, 1873, he lived at Eberly's Mills as shoemaker. Says that he was frequently at Drawbaugh's shop while he lived there, and that he has never been at the shop since; that he saw at Drawbaugh's C and F; does not recollect B and I; may have seen them and may not have. While living at Eberly's Mills his shoemaker's shop was a place of resort. Drawbaugh's talking machine "was even spoken of by the children." P. 369: —

"*Q.* 15. From what you yourself heard at that time, while you lived there, would you say that Mr. Drawbaugh's talking machine was at that time a matter of common and general knowledge in the community there, and a subject of general conversation, or not?

"[*Objected to as incompetent and calling for mere inference, not fact.*]

"*A.* It was, sir.

"*Q.* 16. Do you remember any particular remark made by any person about Mr. Drawbaugh and his talking machine while you lived there? If so, will you please state who the person was that

made the remarks, and how he came to speak on the subject at that time, and what he said?

"[*Objected to as inquiring for mere hearsay.*]

"*A.* Mr. Emanuel Dietz; I heard him make a remark in my shop about Mr. Daniel Drawbaugh and his talking machine. Drawbaugh was coming along in a stooping position, and Dietz said, 'Here comes Dan Drawbaugh, the damned fool; he will go crazy trying to make a machine to talk to people away off.'

"*Q.* 17. You say Mr. Drawbaugh was coming along in a stooping position at the time, and you illustrated it by rising in your chair and bowing your head down as if in deep thought; does that describe the appearance of Mr. Drawbaugh at the time?

"*A.* Yes, sir.

"*Q.* 18. Have you any idea about what season of the year it was when Mr. Dietz made that remark?

"*A.* It was in the fall, I suppose — rather cool weather — I think there was a little fire at the time. It was in the fall — what we call the fall.

"*Q.* 19. You say that even the children at that time were talking about Mr. Drawbaugh's talking machine; can you remember any children that you remember to have heard talking about it at that time while you were there?

"[*Objection renewed.*]

"*A.* I can remember one boy, who was a jolly little fellow and meant everything well. I used to plague him a little, and he said to me once, 'Wait till Drawbaugh gets his talking machine up; I can talk to you then.'

"*Q.* 20. What boy was that?

"*A.* Daniel Fettrow's boy; his name was William Fettrow."

P. 370. "*Q.* 25. From the extent and frequency of the talk in that community at that time, while you lived there, about Mr. Drawbaugh's talking machine invention, do you think that anybody could have been in the village and talked with the people there much at that time without hearing something about Mr. Drawbaugh's talking machine, or not?

"[*Objected to as leading, and as incompetent, because calling for mere opinion.*]

"*A.* I think he would have to be what you would call a deaf man, in my opinion about the matter. Of course, I could not say what other people heard or did not hear, but, in my opinion, they ought to have heard something about it, living close around there."

Emanuel Dietz, referred to by this witness, is still living at Eberly's Mills, and has been all these years (John Kahney, complts, iii, 2057, p. 466, *supra*). He is one of Drawbaugh's near neighbors, who should be most likely to have whatever knowledge there was to be

had of the alleged "talking machine." Defendants have not called Dietz, — an admission that he knows nothing, or nothing to their purpose, about the thing. At the same time they try to prove by the hearsay tattle of this man Hosler, duly objected to, and with the Bowery Theatre gesticulation of ans. 17, that knowledge on the part of Dietz, which they could not prove by Dietz himself.

It is one of the characteristic features of this case that those who should know the most about the alleged "talking machine" — Drawbaugh's immediate neighbors and friends, and especially the men of substance to whom he would naturally turn for pecuniary help — are those who seem to know the least or absolutely nothing, while chance acquaintances, like this wandering shoemaker, Hosler, men of little or no standing in their communities, and either strangers to Eberly's Mills, or resident there for short periods only, abound with startling information on the subject, mostly hearsay.

Daniel Fettrow's son, described as a "jolly little fellow," was William Fettrow (John Kahney, complts, iii, 2041). In 1873 he was fifteen years old (see his age stated in his deposition in the faucet case, complts, iv, exhibits, p. 175). The witness is not very happy in his recollections. They do not call William Fettrow. (See p. 103, *supra*, and the body of the brief.)

No. 191. *Jacob Barber*, defts, iii, surbtl, 371. — Age, fifty-five years; farmer; lives about five miles from Eberly's Mills; has lived there most of his life; has been county commissioner, supervisor and school director; was county commissioner with Wm Sadler, complainants' witness (complts, ii, 1036–54; p. 468, *supra*), from 1876 to 1879. Remembers the visit to the county poorhouse, where a string telephone was exhibited substantially as stated by Mr. Sadler; says that while he and Mr. Sadler were county commissioners he heard Mr. Sadler speak of Drawbaugh's talking machine several times, but he and Mr. Sadler are old acquaintances and have always been in the habit of meeting from time to time (x 44, p. 377). His supposed recollection that Mr. Sadler spoke to him at one time rather than another is a mere general recollection with nothing to support it; but if it were true that Mr. Sadler had mentioned to anybody in 1878 that Mr. Drawbaugh had a telephone, it would be neither mate-

rial nor surprising, for the complainants have already proved that when Mr. Drawbaugh made one in 1878 it was heralded in the newspapers. The witness also testified that in July, 1873, he was canvassing the county as candidate for county commissioner, and as he was canvassing the county on that occasion he went to Daniel Drawbaugh's shop.

P. 373. "And then, while I was talking to 'Squire John B. Drawbaugh in the shop, there was a small chunk of a boy came in and began to look at these tin boxes or glasses that was there on the bench, and he then asked Daniel Drawbaugh some questions about them that drawed my attention to them, and I asked then John B. Drawbaugh what they were. He told me they were a talking machine; I told him then I guessed they wouldn't talk very much; he told me then the time would come when you could stand in the office and talk to a man in Harrisburg as plain as him and me was talking there. That is about all that he said about them that I recollect of.'

Taking this testimony just as the witness gives it, it proves, if it proves anything, *first*, that in July, 1873, all that Drawbaugh had and was at work upon at his bench were F and B, and nothing else; these answer to a "tin box" and "glass," and the witness does not pretend to identify the instrument. But the effect of the interview on this witness was that he did not believe that the thing could talk, and instead of hitching them up and demonstrating that they would, the answer was made to him that the time *would come* when they could talk three miles with them; and that is all that this witness knew about Drawbaugh's alleged telephone except that he thinks he heard of one before that.

It is fairly to be inferred from the witness's description of himself that he was a prominent man of means, and it would rather seem as if he would be one of those that Drawbaugh would have sought to interest in the thing if it was of a character to interest anybody in.

No. 200. *Samuel Snell*, defts, iii, surbtl, 412. — Age, fifty-nine years; Newmarket, about three miles from Drawbaugh; stone mason; has known Drawbaugh for thirty years; was at Drawbaugh's in 1867; says that he then saw a machine which he talked through; it reached from the shop to the mill office; he spoke from the shop and I listened at the mill office; he spoke of the invention

as one that he was working on; I could heard the words pretty distinctly; the thing I listened at looked like a small tin can with a bladder over one end of it, something like B; I don't remember anything about whether there was an electro-magnet on it or not; I didn't see the machine that Drawbaugh talked into; this I remember: I was putting up the steps of the spring at Milltown that day; was employed by the citizens of Milltown; Christian Eberly owned the grist mill; I had heard about Drawbaugh's talking machine before I saw it; heard people talking about it where I was working at Milltown, and therefore I went to his shop to see it; never been at Milltown since, except when I drove through there once without stopping.

At the time when I seen this they were repairing the old clover mill to fit it for a shop; they were going to make molasses faucets. I have heard his talking machine spoken of at New Cumberland; you would hear of it everywhere you went. I remember the flood in the Yellowbreeches, August, 1873; heard that the Etter & Shanklin bridge was taken away. I did not see it. I have heard of this suit going on for a number of years; heard John Fletcher talk about it, and Brubaker of New Cumberland talked about it. I once remarked that I had seen it up there, and there was a man in the party told Drawbaugh what I said. This remark was in consequence of talk going on at that time about the talking machine and the suit.

As to this piece of testimony, it is sufficient to say that it is another example of a witness being called in the so-called "surrebuttal" to improve upon Drawbaugh's own story and that of his witnesses in defendants' original testimony. In *that* testimony there is no pretence that any such state of things as described by Snell existed, in reference to the alleged "talking machine," in 1867, or at dates very much later.

No. 201. *James Davis*, defts, iii, surbtl, 418. — Age, sixty three years; cobbler; Newmarket; has lived at Newmarket, York County, three miles from Milltown, since 1872; lived at Whitehill, a mile from Drawbaugh's shop, during 1871; from 1868 to 1871

lived in Adams County, and before that lived on Fred. Sheeley's farm, a mile and a half from Milltown.

Says that while there, and towards the fall of 1867, according to his recollection, he went to the grist mill and heard them say "that Dan was working on a talking machine down at the clover mill," and I told Daniel Hart's hired man, who is dead now, that we would come down to the old clover mill and see the talking machine, and we went down; and I said, "Dan, they tell me up here at Milltown that you are working on a talking machine," and he said, "Yes, I am working at it now." I saw the machine that he was working on, and he told me it was a machine to talk. While I lived in Whitehill in 1871 I heard a good many people talk about it, — about him talking through it down there at Milltown, but I can't remember who spoke of it; and since I have been at Newmarket they come into my shoemaker's shop and talk about it every little while, and I didn't live there long before they told me they were talking through it from the clover mill up to the big mill.

This is another instance where remoteness lends precision and "largeness" to the testimony, for it is certain from Drawbaugh's own deposition that he never had a line from the shop up to the grist mill, and if he had had one, the instruments alleged to exist at that period could not have talked over it. Of course the whole of such testimony is worthless in law and in fact, except so far as it may tend to show that it was known in the community that Drawbaugh was attempting to make a talking machine. But in point of fact it is not persuasive even for that, because, after the proof from the members and from the records and from the history of the Faucet Company, any man who pretends to say from mere recollection that a speaking telephone existed, was generally talked about and freely shown at that period, simply destroys his own credit.

This deposition offers another difficulty. Fred. Sheeley lived really about half a mile from Milltown, and has lived there for an indefinite time. He is a prosperous farmer, worth $50,000 to $75,000 (Mumper, complts, ii, 1100; p. 470 *supra*). His son recently married Drawbaugh's daughter (J. Ditlow, defts, iii, surbtl, 530). His brother, John Sheeley, also a man of means, was one of Drawbaugh's partners in the Faucet Company. If the claimant's

story be true, surely these men would have known all about the talking machine, and would have been able to offer assistance; but, as usual, the defendants did not call them, and thereby admit that they know nothing of it. They preferred to call a laborer and cobbler full of the gossip of his shoemaker's shop.

No. 209. *David H. Spangler, Jr.*, defts, iii, surbtl, 454. — Age, thirty-three years; called mainly to testify to flood of August, 1873, and its effect on the Etter & Shanklin bridge; also testifies, in answer to leading questions, that he was in Drawbaugh's shop while living on the Studebaker farm, and to the best of his recollection in the fall of 1874; how many times he cannot recollect. Says that he once saw a talking machine there, — he thinks I, — and that Drawbaugh explained about talking through it, and how far you could talk, and that he, Drawbaugh, was talking about getting it patented, "but hardly felt able at the time"; witness had heard of the talking machine before that time.

It appears that ever since 1874 Spangler has been living in the immediate vicinity of Milltown; he gives no particular reason for assigning his visit to the shop and seeing a talking machine to the time he was living on the Studebaker farm; the association is suggested to his mind by a leading question (int. 26) and he accepts it. Of the occasion or circumstances of the alleged visit he says nothing except that it was on Sunday.

Cross-examined (p. 460), he says he cannot recollect at present who was with him on the visit, — there were parties there, probably half a dozen; is not prepared to give the names of any of them; asked whether he met these half dozen parties at the shop or went there with them, he answers, "I wish to have time to collect my memory"; had thought over the bridge question before taking the stand, but had not had time on the telephone; was at the shop probably a couple of hours; is not prepared to give the names of any persons he found at the shop besides Drawbaugh; has known for three or four years that this suit was going on. He is a brother-in-law of the witness Simmons (p. 570, *supra*), and has been acquainted for a number of years with David M. Ditlow, one of defendants' witnesses (defts, i, 597; p. 187, *supra*). They reside

in the same village, — Camp Hill. Elsewhere in his cross-examination witness figures very discreditably as a dull, perverse and shifty fellow (pp. 458 to 461), and it is clear that his alleged recollections about the talking machine are utterly unreliable and worthless.

No. 212. *John C. Schrader*, defts, iii, surbtl, 467. — Age, thirty-eight years; worked for the Drawbaugh Manufacturing Company, November, 1868, to April, 1869; boarded first in the Hauck family with Umberger and Carns; March and April, 1869, boarded at Daniel Drawbaugh's. Drawbaugh kept a servant by the name of Maggie Darr; Charles Umberger and Jacob Carns boarded there also.

"*Q.* 12. Whilst you were working there for the Drawbaugh Manufacturing Company, as you have testified, did you ever see any talking machines?

"*A.* Mr. Drawbaugh on a few occasions took me up to his private room, which was over the machine shop, and there showed me a machine which he called a talking machine.

"*Q.* 13. Did he explain to you what it was for and how it was to be used; and if so, tell so far as you can recollect what he said about it?

"*A.* I do not recollect that he explained to me how it was to be used, but I do recollect distinctly that he said it was for the purpose of talking between distant points, as, for example, between Eberly's Mills and Harrisburg, which I think he used as an illustration. He also made the remark that it might be used to take the place of the telegraph."

I recognize Exhibit B; it had a diaphragm, and I think an armature on it; the bobbins of the electro-magnet were perfect at that time; I recollect seeing some wooden pieces like mouthpiece of F, several of them; I recollect Drawbaugh speaking of it at table on several occasions in the same spirit that he spoke to me about it at the shop.

Schrader's testimony, of course, is to be read and judged of in the light of the testimony of his fellow workman Carns, who testifies positively for complainants (compl'ts, ii, 885; p. 440, *supra*) that he neither saw nor heard of any "talking machines" while working at Drawbaugh's shop; and in the light also of the other proof about

the period of the Faucet Company. Of the workmen shown to have been working on faucets in Drawbaugh's shop in 1869, only two, Schrader and Hoffman, who have been called by defendants, profess to have had any knowledge of talking machines; neither witnessed any attempt to talk; Brooks and Smith (pp. 21, 93, *supra*), called by the defence, put their knowledge of it at a much later date. Carns, called by complainants, denies that such a thing was known to exist. The members of the Faucet Company and those whose connection with it took them frequently to Drawbaugh's shop during a period within which that covered by Schrader's testimony is included, and who were men of substance, not one is called by defendants to prove a knowledge of "the talking machine," while two (John F. Hersh, p. 443, *supra*, and Henry S. Rupp, p. 435, *supra*), called by complainants, testify they had no knowledge of it until at dates long after that of Bell's patent. W. L. Gorgas, son of one of the members of the company, and who during his connection with it managed the company's affairs, took the time of the men employed, assisted in keeping the books, and was continually at the shop during the period to which Schrader's testimony refers, was called by defendants, examined upon purely collateral matters, *and asked not one question in reference to talking machines* (defts, i, 676; p. 223, *supra*). His father, William R. Gorgas, called at the last moment by respondents (defts, iii, surbtl, 1128), simply testifies that at some time, somewhere he thinks between 1873 and November, 1877, Drawbaugh said he had a good thing and that if witness would take out the patent he would give him a half interest in it; but he did not pretend that this was for a talking machine, and defendants did not ask him any question about talking machines. S. M. Hertzler, another member of the Faucet Company, is called (defts, i, 730; p. 244, *supra*) to prove Drawbaugh's poverty, but is not questioned as to the talking machine.

Schrader does not pretend that he ever saw or heard the machine operated, and "does not recollect that Drawbaugh explained to him *how* it was to be used."

His partial recognition of B as a thing which he had seen nearly fourteen years before his testimony was given, taking it for all or more than it is worth, tends to show only that at that time Draw-

baugh was tinkering at something which he called a "talking machine." That he had actually accomplished anything, or that Exhibit B was then a practical working machine, Schrader's story does not show, but shows the contrary. It cannot be doubted that Drawbaugh — calling Schrader in for private exhibitions — would, if he had anything of a practical and operative character, have demonstrated the fact for Schrader's benefit. Furthermore, it is noteworthy that B is the only entire instrument which Schrader professes to have seen; that he does not recognize F (which Drawbaugh claims to have been the instrument used as a "transmitter" in connection with B as a receiver), but simply says that he recollects seeing some wooden pieces like mouthpiece of F. It is not conceivable that Drawbaugh, while making private exhibitions of B, should not also have shown F, if F then existed, nor is it conceivable that if the witness saw both things under such circumstances as he narrates, he should retain so long a clear recollection of the one, and lose all memory of the other. Schrader's testimony, therefore, is chiefly remarkable for its contradiction of defendants' claim that Drawbaugh had operative talking machines in and before 1869, and for its utter inconsistency with the story which so many witnesses have been called to tell, that the talking machine was then and previously matter of common talk in the neighborhood.

It is instructive to compare this testimony with that of the Darr family, who depose so glibly that at this early date, 1869, the "talking machine" was common talk in Milltown, even among the children. Schrader testifies to no such state of affairs, nor to any talk about the talking machine, save by Drawbaugh himself in his shop and his home. Nor is Schrader's testimony consistent with the allegations elsewhere made that Drawbaugh exhibited and talked about his machine to every casual comer. On the contrary, his story is that of special private exhibitions of the thing to himself alone, in Drawbaugh's "private" room.

Called ostensibly to rebut our witness, Carns, he does not profess to know that Carns, with whom he worked in the same shop, boarded in the same house, and shared the same bedroom, ever saw, or had knowledge of the talking machine; that Carns ever mentioned the subject to him, or he to Carns; or that he (Schrader)

ever spoke of it to any one, or that any one save Drawbaugh ever spoke of it to him.

No. 221. *John F. Rupp*, defts, iii, surbtl, 517. — Already testified for the defendants (defts, i, 324). Says that he made a mistake in one of the dates in his former deposition; the desks were changed Jan. 4, 1875; and the diary which he had when he testified before shows this; but it was in November, 1876, as he has already testified, that they went to Drawbaugh's shop. One of the visitors to Drawbaugh's shop on that occasion was Forest Shank, son of the defendants' agent, A. B. Shank, but they do not call him. (For J. F. Rupp, see p. 87, *supra*.)

No. 222. *D. A. Hamacher*, defts, iii, surbtl, 519. — Have already testified (defts, i, 302). Testified wrong as to the date when the desks were put in; swore that it was in 1876; in fact they were put in in 1875. While testifying went to Zearing, secretary of the school board, and looked at the various records which he referred to in his deposition, which showed that the desks were put in in 1875, and then came back on the stand and suppressed that fact. (See abstract of his previous deposition, p. 86, *supra*.)

No. 231. *G. W. Dunlap*, defts, iii, surbtl, 581. — For many years before 1880 lived at Newville, Cumberland County; somewhere about August, in the year 1876, and again somewhat later in the year, he went from Newville to New York with Harry Drawbaugh in Harry Drawbaugh's market car, together with Charles Drawbaugh; says that while waiting over at Bridgeport, Henry Drawbaugh invited him to go to Drawbaugh's shop to see a talking machine and other curiosities. They all went to the shop together, and there the witness saw a wire-making machine, an electric clock, talking machine, fire-alarm telegraph machine, some very fine hand paintings. Nearly all the instruments being shown him, he recognized H and B, but he has no recollection of the others; says that D. Drawbaugh was explaining H to his brother. Witness says that he did not hear explanation because he was interested in something else; he only heard that it was a talking machine; says that in

looking around over the benches he saw B, but didn't see the inside of H. Never was at Drawbaugh's shop at any other time; was at Milltown once, and he made another trip with Henry Drawbaugh in April, 1877, but didn't go to Drawbaugh's shop then. Soon after his return in August, 1876, he told Wm. P. Chambers of Newville what he had seen. Mr. Henry Drawbaugh said he would take Chambers down some time to see for himself. Afterwards, in answer to a leading question, he was induced to say that some of the other instruments shown him looked familiar, "but I can't remember whether they were the precise ones that I saw there."

P. 587. "*Q.* 69. To the best of your recollection and belief are H and B the precise ones that you saw there?
"*A.* They are."

This deposition was purely cumulative and not in rebuttal, and was objected to on that ground.

It is absolutely certain that H did not exist at that time; there was a box with a bell on it, for a hotel call, — a mere electric bell, which several witnesses have mistaken for H. (See the body of the brief for proof about H; also Springer, Holsinger and W. S. Dellinger, pp. 62, 108, 124, *supra*.)

No. 247. *William P. Chambers*, defts, iii, surbtl, 671. — Now lives at Harrisburg; formerly lived at Newville, Cumberland County. Sept. 5, 1876, went to the Centennial as one of the band accompanying the Hope Fire Company. The date of the visit of that company was fixed by the deposition of S. H. Ettla, the secretary of the company (p. 589). The witness says that just a week before that visit he went with Henry Drawbaugh to Philadelphia in his market car on the same occasion when G. W. Dunlap went to New York in Henry Drawbaugh's other market car. This was the second trip that George Dunlap made that summer; says that after returning from the first trip Dunlap told him of a wonderful talking machine that he saw at Drawbaugh's shop; after that I went to Milltown with Henry Drawbaugh. I went to Philadelphia with him with the understanding that we were to get back to have time to go to Daniel Drawbaugh to see his talking machine. H. F. Drawbaugh and I left the cars at Bridgeport, and walked over to Milltown for

the purpose of seeing the talking machine. I saw part of it on the work-bench. I should think we were two hours and a half in the shop. [Instruments shown to the witness.] The only one I recollect is H, which was standing on his work-bench. I remember of his working at a mouthpiece something like the mouthpieces of D and E. He was just about to glue it on, he raised the window to let the air in the room, and the wind blew the mouthpiece down on the floor and broke it, which made Daniel very angry. I would not like to repeat what he said. I saw the inside of H. I recognize the little tin can, as I supposed it to be, and the wires going to it. [In the instrument shown the witness on the stand what he referred to as a tin can was the induction coil with tin case around it.] Says that the arrangements on the inside of the door seem to be the same as he saw, though he does not remember exactly what they were; that he remembers that there was a circle on the inside of the door; says that he remembers very distinctly seeing the brass binding posts on the right-hand side of the outside of the case H. Saw at same visit Drawbaugh's electric clock, his machine for making insulated wire, his alphabetical telegraph, and a number of other small articles. He wanted me to use the instrument to make strings for string instruments; he said he used that wire for his talking machine; he had a coil just made at the time lying on his bench.

It is absurd to suppose, as several witnesses represent, that all the wire was used on the talking machines, for it is certainly true that he was making electric clocks, or an electric clock, at that time, besides other electric apparatus.

Not only is the proof explicit that Drawbaugh did not have H then, but he testifies in terms that he used a separate induction coil for a number of months before he put one into H. All the statements of this witness about talking machines are pure romance. He was Henry Drawbaugh's son-in-law. He says that he took a journey to make this visit, and planned it beforehand on purpose to see the talking machine. If there had been a talking machine there he would have talked through it. If D and E had existed they would have been used; they required no preparation, no battery, no adjustment. The positive fact that under these circumstances there

was no talk through a telephone is conclusive proof that there was no telephone which could be talked through.

Witness says that he dined that day at John Drawbaugh's. That in the band room at Newville he had heard Henry Drawbaugh speaking about Daniel's talking machine at least two years before this visit.

On cross-examination it appears that he is son-in-law of Henry F. Drawbaugh, and was married in January, 1876.

This witness testified that in 1876 Daniel Drawbaugh was living at Mechanicsburg, and was examined as follows (p. 674): —

"*Q.* 33. Were you ever at his house at Mechanicsburg? if so, when, and how happened you to be there?

"*A.* Yes, sir; it was at the time there was a band convention held at Mechanicsburg. There were five or six of us took supper with him. Afterwards the band serenaded him — the same evening."

Was this evidence introduced to sustain the allegation in the answer (p. 7) that "said Drawbaugh for more than ten years prior to the year 1880 was miserably poor, in debt, with a large and helpless family dependent upon his daily labor for support, and was from such cause alone utterly unable to patent his said invention or caveat it or manufacture and introduce it upon the market"?

No. 232. *S. H. Ettla*, defts, iii, surbtl, 589. — Store keeper; recording secretary Hope Fire Company, Harrisburg; called only to testify that said company visited the Centennial Exhibition at Philadelphia, Sept. 5, 1876, and took the "State Capital" Band with them.

No 252. *David Cowens*, defts, iii, surbtl, 695. — Age, sixty-nine years; Rye township, Perry County; farmer; called principally to testify on the subject of the putting in of an hydraulic ram on the Draper farm, Marysville; testifies also (p. 701) that he visited Drawbaugh's shop in company with George W. Kissinger, in the spring of 1876, in the forepart of May, he thinks. P. 703, ans. 52: —

"I saw an old big clock that he had there — an old big clock that he was trying to make go without winding; and saw this other machine, this talking machine. I don't know what he called it, — this thing that you spoke to, and spoke through. He had that there, too."

Drawbaugh was showing it to Kissinger and me, and telling us what it was for. Drawbaugh talked through it, Kissinger listened first, and then witness listened to it; you could understand it; Drawbaugh was in a different room. "Drawbaugh said he wanted to get, — think it was the clock he wanted to take to the Centennial Exposition, — but he was going to get it ready and take it down there that fall."

Called subsequently for complainants (complts, iii, 2462), Mr. Cowens testified as follows (p. 2463): —

"*Q* 25. When you were testifying on the part of the respondents last winter, you were examined in reference to having seen and listened at something referred to in your examination as a 'talking machine' at the time you visited Mr. Drawbaugh's shop with Mr. Kissinger; will you please tell us what this thing at which you listened on that occasion was, as you now recollect it?

"[*Objected to as not in rebuttal of any evidence offered by defendants in surrejoinder, and as not competent in any view at this stage of the case.*]

"*A*. I didn't see the machine, I heard it; there were holes through the wall where I listened; Drawbaugh was in the other room; he talked through it; I don't know what it was like.

"*Q*. 26. On that occasion did or did not Mr. Drawbaugh explain any talking machine to you, or say anything to you about talking by electricity?

"[*Same objection.*]

"*A*. He did not.

"*Q*. 27. After you had given your testimony for the defendants last winter, and while you were still in town here, did or did not any of defendants' counsel show you anything stated to be a talking machine and ask you whether or not you had ever seen it before; and if yes, what was your reply?

"[*Same objection, and as immaterial.*]

"*A*. Well. they showed me one — Mr. Jacobs' in his office; they called it a talking machine, and asked me if I had ever saw it before; I told them I hadn't."

What do they mean by their testimony from Cowens? From the witness's inability to identify, from the description he gives and from the fact that when the defendants had him on the stand they did not ask him to describe the instrument he thinks he saw, it is clear that he did not use any instrument produced by the claimant. No receiver which has been produced could have been so fastened to the wall that a person could think he was listening at a hole in the wall. All that are alleged to have existed before that time were to

be held in the hand and connected with flexible cords or wires to the line. Several other witnesses speak of listening at an instrument fastened to the wall. Why do not the defendants tell the Court what there was that could give rise to such testimony? Certainly no instrument produced, nor any described by the claimant, could have done that; a string telephone could. The claimant can explain this matter if he wants to, and he would, unless the facts about it would hurt his case.

According to the claimant's story D and E had existed for over a year; if those were in existence no other receiver would have been used. The witness could not, taking D or E, or even A, in his hand and listening to it, have thought that he was listening to a hole in the wall. These instruments were not to be supported by any wall, except the kind through which Pyramus and Thisbe talked their love. If this witness proves anything, therefore, so far from contradicting Mr. Kissinger, he proves that D and E could not have existed at that time.

Several of the defendants' witnesses speak of Drawbaugh's project to exhibit at the Centennial. To exhibit what? His clock. This witness speaks of it; Holsinger, in his newspaper article, published in November, 1875 (see p. 107, *supra*), says that Drawbaugh was then getting up an electric clock to exhibit at the Centennial. Hamme (p. 649, *supra*) says that in February, 1876, Drawbaugh was getting up a clock to exhibit at the Centennial. The defendants allege that he had D and E in the spring of 1875; he proposed to make an exhibition at the Centennial; he did not intend to take D and E, which he already had completed, and which only needed some of the wire he had about the shop to connect them; *he proposed to construct an electric clock, not yet made, and take that.* When he did go to the Centennial he took neither. Can there be any stronger proof drawn, not from mere memory, but from the admitted action of the man, and from his announced plans conclusively proved by the contemporaneous publication of his friend Holsinger, as well as by the evidence of his own witnesses, that he had not then got anything worth exhibiting, and could not think of anything better or more surprising to show to the public than a clock which he had yet to build?

No. 256. *Ezra F. Gilbert*, defts, iii, surbtl, 726. — This gentleman has often been spoken of in the testimony (complts, 576, 663, 886, 933, 1216; defts, 339, 666). He says that he has lived at or near Eberly's Mills since 1866 or 1867. The plan shows that his house is right in the village. He was referred to by John M. Kissinger (complts, i, 576) as the man who lived in the "big stone house," which implies a man of means. The defendants called witness after witness from a distance during their surrebuttal, merely to testify that they had heard mention made of talking machines at Drawbaugh's shop. They put Gilbert on the stand to prove when a ram witness worked for him, in order to help that man to fix a date, and *did not ask him a single question about telephones.* Here is another man, then, who must have known of the talking machine if it existed, and who knows nothing about it. What kind of an invention is it, which during ten years was unknown to a man who lived in the village within stone's throw from Drawbaugh, and yet was common talk twenty miles away, but which no one, near or remote, ever wanted to use?

No. 285. *John B. Heck*, defts, iii, surbtl, 892. — A brother of George B. Heck; a man frequently referred to in the testimony by George F. Eyster, Jacob Barber and other witnesses; he is called simply to testify to the fact that his brother, George B. Heck, died in July, 1873.

George B. Heck and his estate owned the building and water power used by Drawbaugh as his shop. John B. Heck lived at Milltown, and in settling his brother's estate of course had charge of the shop. The defendants proved upon cross-examination of John Kahney that he was a man whom John Kahney used to meet there between 1871 and 1875. They bring other witnesses from a distance to prove that many miles away from Drawbaugh's shop they heard that he had a talking machine; this resident of Milltown, who owned or represented the owners of the shop, is proved to have been frequently there, was on the stand and *they asked him no question about telephones.* Thus he belongs to that large class of next-door neighbors who never heard that Drawbaugh had a talking machine there, and do not believe that he had. (See for this the body

of the brief and John Kahney, p. 466, *supra*, and for some other instances of the kind, p. 457, *supra*.)

No. 261. *W. J. Maglaughlin*, defts, iii, surbtl, 751.

No. 262. *Jacob J. Maglaughlin*, defts, iii, surbtl, 763.

Father and son. They are called to support Hoffman (defts, i, 502, 689; p. 137, *supra*). As usual with the supporting witnesses called in surrebuttal, he saw Hoffman do, and heard him say a great deal more than Hoffman himself says he did, saw or said. These witnesses are fully considered in connection with Hoffman, p. 137, *supra*.

No. 265. *Jacob R. Vanasdale*, defts, iii, surbtl, 788. — Of Silver Spring township, Cumberland County; owns a steam thresher. February, 1875, shelled clover seed for Mr. John Renard at his Milltown farm. Jacob Ensminger helped me; it was the only time we ever worked there together; an evening we were there we went to Drawbaugh's shop and saw him. He and Shorty Drawbaugh were turning off axles; we saw a clock there run by a magnet; we saw one run by electricity and then we saw something that, he said was a talking machine that he said he was getting up and we saw a fire alarm that he had. F, B, C, I, A, D, E b ing shown to the witness, he states that he recognizes I, A, F, B and C; says he supposes C to be a likeness machine; noticed the curled magnet on D, but it was not put together this way; this curled magnet was lying together with the others, but not fastened to anything. Drawbaugh told us it belonged to a talking machine; I asked him whether the hole of A was to look into; he laughed about it, and I can't mind what he said it was for. C had the magnet and spools on it like C reproduced. What we went down to the shop for that evening was to get our knives magnetized.

It is not credible that the witness saw C in 1875 with the permanent magnet on it. That magnet was merely laid on, and C could hardly be moved without dropping it off. It would not be kept on it; and no one saw it in use that spring.

Cross-examined about his book and proved to have kept it so loosely that it was very unreliable.

The witness couples the alleged visit to Drawbaugh's shop with the shelling of clover seed for John Renard, at Milltown, and states

(p. 790) that this was the last work of the kind which he had done for Renard at Milltown; also (x 50, p. 797) that Ensminger quit working for the witness Feb. 5, 1875; may have done some work for him in 1876; is not positive. The book, however, appears to show that Ensminger worked for the witness in October, November and December, 1875, and January and February, 1876; and also that witness shelled clover seed for Renard at a time which from the order of the book entries would be Feb. 24, 1876. Witness, however, swears that this entry was only a transcript of the 1875 entry; and intimates (x 48) that he was in the habit of making such transcripts from one part to another of the book; but when asked to point out a single other example in the book, he cannot do so.

No. 268. *Jacob F. Ensminger*, defts, iii, surbtl, 808. — He is the person referred to by the preceding witness, Vanasdale, and says he remembers the visit. The store keeper at Milltown had an explosion in his store, and was auctioneering off his goods. This was within three weeks after the explosion [which in fact was Jan. 18, 1875]; there was some excitement about it; building was a total wreck and the property inside of it was all broken and scattered over the building. This event was not referred to by Vanasdale in connection with the alleged visit. At Drawbaugh's shop witness says he saw his electric clock; dial telegraph; several pieces that he had made which he called his talking machine, — the magnet of D, and several other pieces that he had. I identify A and D, and the permanent magnet of C reproduced. The parts that I remember best in this instrument are the magnets partly covered by this brass plate. At this visit I saw two electric clocks at Drawbaugh's; one was finished and running right along; the other was not finished; the one that was finished was in a plain wooden case with the magnet underneath the pendulum; had no weights, and if I remember, it was noiseless. I would not be positive on that point. The one which was unfinished was about the ordinary size, as near as I remember. I do not think there was any particular case to it. It was boxed up, though, so as to keep it from being exposed to the dust.

No. 272. *William H. Martin*, defts, iii, surbtl, 827. — Age, thirty-five; eight miles west of Pittsburg; carpenter; lived at York

very near seven years; went to live there to the best of my knowledge in 1876; before that lived in Cumberland County from July, 1870; in Cumberland County first worked for Abraham May; first work I did was on Wilson Walter's barn; built an addition to the house of Mr. Daniel Hart of Milltown; don't recollect whether it was in 1870 or not; think it was that fall — not more than a year either way; boarded with Mr. Hart while building that addition. While living in Cumberland County, heard of Drawbaugh's water ram, molasses faucet, and a talking machine. First heard of the talking machine in 1869. It was talked about at Mr. Hart's table while we built the extension to his house. When we would go into meals we would talk about it.

In 1870 I went to Drawbaugh's shop to see his talking machine, but I did not get to see it at that time; Drawbaugh had gone away. Went afterwards with John Keefauver; found Drawbaugh there, and talked through the talking machine; I was up in the attic — you may call it upstairs — and Keefauver was down in the basement. Don't remember about the clock; both of us talked through the machine to each other; to the best of my knowledge, Keefauver and I changed places while talking; I heard and understood through the machine what Keefauver was talking into it; there was no conversation back and forth in the machine in particular; we talked, but I can't remember what we did talk — some foolishness; I don't remember what. In answer to a leading question, witness states that he talked through the machine and Keefauver answered back through the machine. To like leading questions, witness states that while he was living in Cumberland County he heard a good deal of talk in the community about the talking machine; heard Abraham May talk about it in 1870; was in Drawbaugh's shop last winter; nobody but his foreman was there. The last time before that that I was in the shop was when me and Keefauver was there.

Cross examined. — Keefauver and I started from Oyster's Point Tavern. He kept the hotel there. I don't know whether we visited any place besides Drawbaugh's that day, or not; I suppose we went home then; don't know how long we were at Drawbaugh's shop; might have been there an hour; long enough to talk through the talking machine; all our time there was spent in talking through the

talking machine — I think so; we might have had a few words with Mr. Drawbaugh; I don't recollect; don't remember that we did or saw anything but the talking machine; don't know, but don't think I did; if I did, I don't remember; can't tell what Drawbaugh was working at when we went there; didn't see anybody but Drawbangh that I remember of; I don't know whether Keefauver or I talked through the machine first.

No. 274. *John F. Keefauver*, defts, iii, surbtl, 837. — Age, forty-one years; Harrisburg; grocer; formerly kept tavern at Oyster's Point two years, from April, 1872, to 1874. Have been in Drawbaugh's shop twice; first with Mr. Martin (the last witness). We saw that talking machine. Martin and I talked through it. I was in the cellar and he in the attic. I both talked through and listened at the machine.

P. 839. "*Q.* 18. When you listened at the machine, could you hear and understand what Mr. Martin was saying through the apparatus, or not?

"[*Objected to as leading.*]

"*A.* Yes, sir; we could hear.

"*Q.* 19. Did you carry on any conversation through the machine with Mr. Martin?

"[*Same objection.*]

"*A.* Yes, sir."

We then looked around at his clocks a little while. I was in the attic that day — right up under the roof where the rafters were — to talk through the machine again with Mr. Martin; he was in the cellar; earth floor to cellar; two stories of the building between cellar and attic; Drawbaugh instructed us how to use the machines. Said he intended to have them used in place of telegraphing.

"*Q.* 32. Did he tell you whether they were operated by electricity or not?

"*A.* No, sir.

"*Q.* 33. What was your understanding about that at the time?

"[*Objected to as incompetent.*]

"*A.* I had been told it worked by electricity."

Had heard of the talking machine about three years before. When I first heard of it I was seven miles west of Carlisle.

About a year after the visit with Martin, I visited Drawbaugh's shop again. Had business with George Heck about three and a half months before he died, — about the middle of April, 1873. My first visit to Drawbaugh's shop was in the spring of 1872.

On my second visit Jacob M. Sadler was with me; saw a talking machine on that occasion. Sadler and I talked through them. They were in the cellar and attic; I was in the cellar. We talked back and forth through the machines. Heard and understood.

"*Q.* 55. On both of those occasions when you were at Mr. Drawbaugh's shop, were you or were you not able to carry a conversation on, through the machine, with a man stationed at the other end of the line?

"[*Objected to as leading.*]

"*A.* We were."

I thought that the Bell telephone was Mr. Drawbaugh's telephone until some time last fall. Last saw or had communication with Martin in 1876 before to-day.

No one else has pretended that any telephone was ever used in the attic.

Cross-examined. — There were three clocks that I took notice of in Drawbaugh's shop when Martin and I were there (common-sized clocks); the reason that I took particular notice of them was, that the pendulums all swung to this side at once, and then swung to that side at once, and he told me they were all run by electricity was the reason they done that. These clocks were all in one room, and all moving together, standing at the wall on the second floor. We were in the shop about an hour, and spent, maybe, about fifteen minutes at the talking machine. We were talking to Mr. Drawbaugh most of the time. I was not drinking and intoxicated that day. Mr. Martin was not that I know of. I heard Mr. Martin say to-day that he did not know for sure whether he was intoxicated or not. I did not hear him say he was, or I did not notice it in him if he was. Heard him say he had been drinking a little before we went over, and felt it a little, but I didn't count he was intoxicated at the time. [The witness then kept a tavern and now keeps a "grocery."] The second time I was at Drawbaugh's shop we saw just about the same as we did the first time. There were a good many machines there I

didn't know the use of. Drawbaugh was working on some patterns. We were in the cellar and in the attic, and were there about half an hour, talking at the machine a little while and then talking to Mr. Drawbaugh. He showed us around through the shop. He had a molasses faucet he was showing us, and we looked over his clocks again, and some other machinery, — machinery that he used in his work, I did not really know what for, — saws, and so on. I only mind of three clocks on this visit, appeared to be the same clocks, and in the same place as those I had seen before there. I was first in the cellar that day; don't know what I afterwards went to the attic for; didn't talk from the attic down. That day Jacob Sadler was in the attic with me. We looked around among some old rubbish there; don't know how long we were up there. The first telephone I saw at Harrisburg was at the car works there; I don't mind how long ago it was.

The story of Martin is only a faint echo of that of Keefauver's. Martin remembers only what he is called to testify to. Keefauver pretends to recollect collateral facts and circumstances, which other evidence shows cannot have existed or happened. As to the main story of the two men, that they held conversation *to and fro* between the attic and the cellar of the shop by means of a talking machine, the only machines alleged to have been in existence at that time were B, F, C, I and A. The story puts B and F out of the question, and the proof shows that there is no possible combination of the other three which allows of a conversation being carried on through them.

The main story, and that part which alone is material, being manifestly false, it is hardly necessary to spend time in examining the details of Keefauver's romance. It may be noted, however, that his account of his alleged visit with Sadler, and the condition of affairs then in the shop, is suspiciously similar to the account given of the visit with Martin; we have the talking machine, and the same clocks in the same places. *They saw many more clocks than existed in 1873.* Keefauver says he and his companion spent only a short time at the talking machines, and a much longer time wandering around the shop seeing other things and hearing Drawbaugh explain them, yet their memory seemed to be quite blank as to anything

except talking machines, clocks and molasses faucet, Drawbaugh's connection with which is now matter of notoriety.

Jacob M. Sadler, referred to by Keefauver, is dead, but defendants have offered in evidence his *ex parte* affidavit, taken just before the beginning of this suit. That affidavit does not refer to Keefauver or his incident, while Keefauver is one of the eleventh-hour witnesses injected into defendants' surrebuttal, and the obvious extravagance of whose stories comports with the lateness of their production.

No. 287. *Frank F. Landis*, defts, iii, surbtl, 897. — Age, thirty-eight; residence, Waynesboro, Pa.; machine business; from fall of 1876 till September, 1879, was one of the firm of F. F. & A. B. Landis, steam engine and boiler makers, Lancaster, Pa. In November, 1877, Mr. J. E. Shettel of Shepardstown wanted to buy a steam engine from witness's firm, and having written for prices and terms, witness went to see him. While there, Mr. Shettel and Mr. Theodore Grissinger (Mr. Grissinger being an agent for witness's firm) wanted witness to go and see an electric clock Mr. Drawbaugh had in his shop. Messrs. Shettel and Grissinger were about taking an interest with Mr. Drawbaugh to manufacture an electric clock, and they wanted witness to see the clock because they wanted him to take one of them as part payment for the engine. The parties went down to Drawbaugh's shop, and while in the shop Drawbaugh showed witness a clock and explained the working of it. While speaking of the different uses of electricity, witness mentioned to Drawbaugh that he had read an account of an experiment with an apparatus for transmitting speech by a current of electricity. When witness mentioned that subject, Drawbaugh dropped the clock and told the witness that that was an old thing; that he had found out and made instruments ten years ago that would do the same thing. Drawbaugh then went into an adjoining room to the one his visitors were in and asked them all to come in; then he went on to show the manner in which it was done; showed a small wooden box about three inches in diameter, with a funnel-shaped hole on the one side; he placed this over his mouth and spoke into it, also sung in a humming way, which produced a vibration of the metal disc, which produced a sound, and then went on to explain

in what manner it was transmitted by an electric current, which gave witness the idea of the principle of the telephone as he now understands it. The instrument which Drawbaugh showed the witness, he, Drawbaugh, used to illustrate the arrangement in a box that he had fastened to the wall of the room. Witness is positive that Drawbaugh showed him no other but these two, but spoke of a number of instruments he had made in that way. Witness being asked to describe the appearance of the box fastened to the wall of the room gives this very vague and general description: "It was a wooden box ten or twelve inches high, and from six to eight inches wide, with a mouthpiece or funnel-shaped hole resembling the mouthpiece or hole in the small instrument that he spoke through." Being shown a number of defendants' exhibits, witness selected D as being as near as he could recollect to the one Drawbaugh showed him, or the nearest like it, and the large box H as being as near as he could recollect the *size* of the one fastened to the wall. Defendants' counsel endeavored, with very indifferent success, to elicit from the witness a more certain and exact identification of H, but witness would commit himself to nothing more definite than that the exhibit is in *size* what he saw, and said that he also remembers the screws on the side, meaning the binding posts of H, and the bell on the top; could not say whether the instrument he saw had a sloping or inclined front like Exhibit H. Mr. Shettel and Mr. Grissinger were in the room with witness during at least a part of the time when Drawbaugh was discussing and explaining the telephones, but witness does not think they were much interested in it, as he cannot remember them saying anything about it; their conversation while there was about the electric clock. Witness asked Drawbaugh whether he had a patent on his telephone invention, or whether they hadn't got it patented; Drawbaugh said he was unable to do anything with it, as no one seemed to have any faith in the arrangement; that the people were all too slow and could not understand it as he did; remembers of him also saying that some thought he was crazy. Witness saw two electric clocks, one a large clock about six feet high, standing against a partition to the left of the door as you entered the room, and then a smaller one hanging near a window with wires attached to

plates under the soil of a large flower pot with plants growing in it. Don't remember seeing any clocks in the room where he saw the telephones. The telephone box was fastened to the right of a window right opposite door through which witness and his companions entered the room, about four and a half or five feet from the floor. His impression is that the room was about 12 x 18 or 20; there was nothing to prevent any person who might enter the room from seeing the telephone box; there was nothing over it.

Cross-examined. — It is witness's recollection that he had read an account of an experiment made with an apparatus for transmitting speech by a current of electricity a short time before visiting Mr. Drawbaugh's place, in the *Scientific American* supplement; he subscribed to it in 1876, and afterwards; his impression is that it was only a short account of some experiment which had been made, telling what had been accomplished; no illustration of the instrument given; cannot say just what they had done, but remembers distinctly that there were some great things predicted in the article, for instance, a man in New York speaking could be heard by an audience in San Francisco; it was an account of a trial between two points a considerable distance apart; that they got it so that they could be heard distinctly, but he don't think that he had any idea, after reading the article, of the construction of the machine; remembers the name of Bell as the inventor; thinks it was in New York City, or between that city and some other point that the trial was made.

This witness's testimony is immaterial, because it refers to a time long after the grant of Mr. Bell's patent. It is not of great moment, therefore, to inquire what might have been its exact date.

The statement that Shettel and Grissinger wanted him to take a clock in part payment shows that the Clock Company had been formed or agreed upon, which would put the date not long before April, 1878, though the witness would have it in November, 1877. Of the two companions named by Landis, Shettel testified for the defendants (defts, i, 215; p. 63, *supra*) and Grissinger for the complainants (complts, i, 511; p. 408, *supra*). The testimony of both is so distinctly inconsistent with Landis's story as to disprove it. Shettel's only statement in answer to questions about H is that in the spring of 1877 he saw a box with a bell on it, and Drawbaugh

rang the bell and told him it could be used for giving alarms and calling at rooms of hotels; Drawbaugh did not say that it was to talk with, and Shettel does not know that he understood that it was (p. 218); between 1872 and the spring of 1878 Drawbaugh never said anything to him about patenting a talking machine; saw D, E, H, etc., in 1877 and 1878; that is all he knows about the matter. Grissinger gives a full statement of what he knows, and swears that he never saw H, but did see D or E, or both. H is so peculiar in shape that it could not be forgotten. Now a visit, an invitation into Drawbangh's private room to see telephones, a going into that room by all three, an exhibition and explanation of D and H, during which H was opened, and a discussion about patenting them, is inconsistent with the testimony of Shettel and Grissinger. Moreover, if either Shettel or Drawbaugh had had the slightest recollection of such an incident, it would have appeared in the deposition of Shettel or the cross-examination of Grissinger; those two depositions cover fifty printed pages. The whole story of this witness, therefore, runs against the recollections of Shettel, Grissinger and Drawbaugh.

So much of his story as implies, though vaguely, that Drawbaugh had *succeeded* "over ten years ago" is of course in itself incompetent. It states an untruth, because the instruments alleged as of that date— 1867–8 — will not talk. Moreover, the positive statements which Drawbaugh made that spring to others, evidenced by newspaper articles *published and read by Drawbaugh before the Landis visit*, are too much for any memory of conversations to stand against.

The memory of the witness is bad. The office room was not 20 x 12, as he states, but 10 x 12. A room 20 x 12 did not exist until the Clock Company put up their partitions, after April, 1878. Landis would have it that the visit was directly after Nov. 17, 1877. The Grissingers' negotiations did not begin until 1878. He puts it, on direct and cross-examination, that he had, "quite a short time before" the visit, read in the *Scientific American* an account of "an experiment with an apparatus for transmitting speech by a current of electricity." By January, 1878, there were 10,000 telephones in commercial use, and every reader of the *Scientific American*, as Landis says he was, knew the fact of this general use. Finally, the production of this witness at so late a stage in the case gives rise to

suspicions which have been affirmatively proved well founded in the case of many other similar witnesses.

No. 277. *Benjamin K. Goodyear,* defts, iii, surbtl, 1011. — Residence, Carlisle; not engaged in any business at present; member of the Carlisle bar; formerly superintendent of the Antietam Iron Works; from November, 1870, to 1879, was under sheriff of Cumberland County, Pa. While under sheriff, and in December, 1871, seized certain property of Geo. W. Kissinger, then living at Eberly's Mills, under an execution. Kissinger claimed the benefit of the exemption laws. Witness had appraisers appointed and made an appraisement on the 4th of December, 1871. Summoned John B Drawbaugh as one of the appraisers and found him that day in the workshop of Daniel Drawbaugh; had to wait for John some time, and occupied his time by talking to Daniel Drawbaugh, who showed witness the electric clock and other instruments through the shop; showed his talking machine as he called it, and told witness that it was an electric machine also.

Drawbaugh took witness to an instrument and asked him to go to another portion of the building on the floor above; witness listened and heard him speak; what he said through the instrument witness does not remember, neither does he remember anything about the instrument as to its appearance. Witness thought at the time Drawbaugh was deceiving him by talking through a speaking tube; paid little attention to it; witness's attention called to the matter again during the Centennial year while in Philadelphia by seeing some boys talking through a string telephone. In answer to one of the customary leading questions of defendants' counsel, witness testifies that he distinctly heard and understood the words spoken by Drawbaugh through the instrument. Witness had never levied execution on the goods and chattels of George W. Kissinger since the 4th of December, 1871.

Cross-examined.—Witness describes the electric clock that he saw as being, he would suppose, about three feet high, with a face about fifteen inches in diameter, fastened up against the gable end of the building, the face probably eight feet from the floor. From out of the bottom of the clock two wires extended downward into a vessel containing earth and some description of plants or flowers growing

in it; the clock had a wooden case; don't remember what sort of wood it was; thinks it was plain. Drawbaugh showed the witness the works of another clock he was making, and explained to him that he made the works and wheels himself; showed him a very large horseshoe magnet and other things that witness cannot now remember. Drawbaugh was working at one of the larger wheels of the clock when witness went there.

Was last at Eberly's Mills in 1879, some time in April, on an electioneering tour for the office of sheriff; has no recollection when last before that he was there; may have been there dozens of times since the holding of the appraisement there, but when he can't say; would be safe in saying that he had occasion to visit Eberly's Mills in his capacity of under sheriff half a dozen times after 1871; can give no dates as to years or months.

In 1871 Drawbaugh had no such electric clock as the witness describes; in 1878 he did have such a clock and the wires from it did run into a vessel containing earth in which flowers were growing. This latter detail is proved as of that date by the defendants' witness, Landis (p. 676, *supra*), and no witness has mentioned it as of any other date. It is certain, therefore, that the witness attributes to 1871 what he saw at some of his many later visits between 1871 and 1879, of the particulars of which he says that he has no recollection. This is another of the instances with which this case abounds, of the arbitrary association of events or alleged events having no necessary or logical connection with each other.

No. 295. *George A. May*, defts, iii, surbtl, 982. — Age, thirty; laborer; Eberly's Mills; began to live there about Christmas, 1874, residing then with Jonathan Fry one year; then worked in York County for about nine months, and next worked in the mill at Eberly's Mills two months. Lived with Fry again for one year and then for two years with Samuel M. Hertzler. April, 1879, married the daughter of the defendants' witness, Daniel Fettrow (*q. v.* p. 94, *supra*) and has lived in Fettrow's house at Eberly's Mills (formerly Drawbaugh's house) ever since.

Was in Drawbaugh's shop in March, 1875, while living at Jonathan Fry's; took a razor there to be ground. Did not take it to

the shop, but to Drawbaugh's house; he then lived in the Fettrow house. Called for the razor at the shop on a Sunday and stayed about two hours. Drawbaugh showed me talking machines and talked through them. Witness was at south side of building and Drawbaugh at the north, in different rooms on the same floor, the third; axle work was going on at the shop. Drawbaugh told him so at the time.

For once the defendants let go the leading strings and trusted to the witnesses's memory to identify the instruments; the results were significant (p. 985): —

"*Q.* 42. Will you look at the instruments now spread before you on the table, and say whether or not you can identify any of them as the instruments shown you by Daniel Drawbaugh at the visit to his shop, concerning which you have testified.

"[*The instruments on the table are A, B, C, "C reproduced," D, E, F, G, H, I, L, and M, and O.*]

"*A.* Yes, sir; here is three [indicating D, E, F], and this one [indicating H]."

"*Q.* 57. When you first saw instrument H, whereabouts in Drawbaugh's shop was it?

"*A.* It was to the south side.

"*Q.* 58. Was it fastened against something, or standing, or lying upon something, or how was it when you first saw it?

"*A.* It was fastened against the boards.

"*Q.* 59. Did Mr. Drawbaugh call your attention to it, or did you see it without your attention being called to it?

"*A.* I seen it without my attention being called to it."

It is perfectly certain, therefore, if this witness has any memory at all, he saw H at that time. He then testified (p. 987): —

"*Q.* 67. Was the time you got your razor the only time that you ever saw talking machines at that shop?

"*A.* Yes, sir."

Thus, the only time he ever saw any talking machine at that shop he saw H fastened up to the wall. All this is in his direct examination.

There is not a pretence that H existed or was thought of until the summer after our patent, and at least fifteen months after the alleged date of the visit (March, 1875). Those alleged to exist in 1875 are F, B, C, I, A, D, E. H is so different from these that the feeblest memory could not confound them; and thus, unless this witness is almost an idiot, his visit must have been in a later

year and after our patent. This is probable enough, because he has lived in Milltown ever since 1874, and has been in Drawbaugh's shop (ans. 66, p. 987).

Then, returning to his lesson, he pointed to D and E as the things talked through; could understand what Drawbaugh said; answered back through the same instrument he listened at; Drawbaugh sang notes and spoke words, and witness understood them. Drawbaugh said through the instrument that "I shall hold my one ear shut and see if I can hear it any plainer"; witness did so and "heard it plainer." "The water running into the trunk at the side, that emptied out outside of the shop," made witness hear less plainly before he held one ear shut (ans. 51–4, p. 968). Witness told Drawbaugh through the machine that he could hear it more plainly. Here is one constant source of noise, yet those who heard perfect speech through F and B and C and I never took the precaution to close one ear. When Eicholtz listened Drawbaugh started the machinery in order to make more noise, and Eicholtz still understood as well (p. 630, *supra*), if he is to be believed at all. It appears as if this witness was narrating an actual occurrence, shown by the incident of H to be in a much later year.

Instrument H was at the south side of the shop fastened against the boards the first time he saw it. Saw it before talking through D and E; did not examine it particularly and did not handle it; don't mind that Drawbaugh made any explanation of it; F was lying on a bench.

As D and E required no battery and no adjustment, it was natural enough for Drawbaugh to show them after he had H.

Cross-examined. — Witness lives in the house at Eberly's Mills bought by Fettrow from Daniel Drawbaugh in 1876; has been living in that house four years, since April, 1880 (x-ans. 80). Afterwards he said (x 106) that he had lived in that house ever since he married Fettrow's daughter, in April, 1879. Fettrow and his family live in the house; worked for Hertzler (defendants' witness). In 1882 worked for Dr. Moffit, the dentist (defts' witness) till about the last of May, and tells of Moffit's sudden disappearance; then went to Mr. Reneker's (defts' witness). Is not doing any work now. Has been living with his father-in-law, Fettrow (defts' witness), since

April, 1879. Has *not* heard a great deal of talk about this suit in Milltown and neighborhood during the last two or three years.

P. 994. "*X Q.* 140. When were you first asked what you knew about Drawbaugh's talking machine?

"*A.* It was about two years ago; Dan asked me whether I didn't mind the time he showed it to me in 1875."

His cross-examination shows that his intelligence is of the lowest and his memory of the weakest, especially upon the question of dates. He could not tell even the principal part of his occupations for the last five years. He first swore that he had lived in Fettrow's house four years; that is, since the spring of 1880. Then he swore that he was married in February, 1879, and had lived in his father-in-law's (Fettrow) house ever since that. Questioned as to the three or four places he had been hired at since then, he stated one year as the year he worked at Hertzler's, and then a different year, and, finally, could not tell during which of the last five years he worked there, nor, with any certainty, where he had worked during any particular one of those years.

This deposition is another piece of purely cumulative evidence introduced during the so-called surrebuttal and under circumstances which are more than suspicious. May has lived at Eberly's Mills, and within a few yards of Drawbaugh, for ten years, including the whole pendency of this suit. His father-in-law, whose house he has lived in for the last five years, is Daniel Fettrow, one of the defendants' most conspicuous witnesses (defts, i, 362; p. 102, *supra*). Everybody he has worked for since this suit began has been one of the defendants' witnesses.

The most important instruments, indeed the only ones that are of strictly legal importance in the case, are D and E, and to these the defendants' testimony was very meagre. This witness is called to swear to a story which, if true, is as strong as anything, indeed stronger than almost anything which they have put into the case. If he is correct he saw and talked through these instruments within a week or two of the time alleged by his father-in-law, Fettrow, to be the time when he saw them and talked through them, and to which Fettrow testified in the spring of 1881, while this witness, May, was an inmate of his house. It cannot be doubted that when the

defendants were originally preparing their case, Drawbaugh ascertained what knowledge and recollection this witness had on the subject, and the fact that they did not call him then, is perfect proof that the witness was not then able to testify to anything material. Indeed, this is not left to conjecture; he testified (p. 994): —

"*X Q.* 140. When were you first asked what you knew about Drawbaugh's talking machine?

"*A.* It was about two years ago; *Dan asked me whether I didn't mind the time he showed it to me in* 1875."

And two years before the witness made this answer the defendants were taking their testimony in chief and had been for nearly a year.

The Court will observe the way in which Drawbaugh first accosted this witness on the subject. He did not ask him what he knew about the talking machine. He put the inquiry in a form so leading that the answer would have been excluded if the question had been asked in court. The witness did not tell, *and the defendants on re-examination did not ask him to tell*, what answer he then made to that inquiry, but it is plain that he did not remember as desired, because if he had they would have called him. His pretended memory is simply the result of the gossip which has been dinned into his ears for the last two years.

The defendants, departing from their usual cautious habit of showing the witness only the instruments they wished him to swear to, enabled us to know that the only time he ever saw talking machines was when he saw H, and consequently after the date of the Bell patent, and thus proved the worthlessness of his memory about dates and of his testimony.

It is due to this fortunate accident that the fraudulent character of this testimony — for it deserves that phrase — has been thoroughly exposed. It is a deposition of great value to the complainants, for it opens the eyes of the Court to the manner in which the defendants' record is manufactured.

It is difficult to treat such a deposition seriously, or to analyze it as one would that of a witness who testified from an honest memory, but, so far as it goes, what are stated in it as facts are very damaging to the defence, for, if they are to be taken as true, they prove that this man, living close to Drawbaugh, and knowing him from the

latter part of 1874, never had any knowledge of any talking machine until the time when he saw in the shop H, an instrument not pretended to have been made until a considerable time after the date of the Bell patent. This is a part of the deposition which is more likely to be correct than anything else, because while the witness's memory is peculiarly weak about dates, he would be right about the instruments he saw there, especially so peculiar a one as H, if his memory is worth anything.

The readiness with which the defence call so worthless a member of Fettrow's household, and the late date which he really proves, if he proves anything, leave no doubt as to the reason why they have not called Fettrow's son, William, a man now twenty-five years old, and proved to have been a constant frequenter of the shop from childhood, and employed there and present there during the pendency of this suit.

No. 300. *Abraham May*, defts, iii, surbtl, 1028. — Age, forty-seven years; residence, Perry County; farmer now, formerly carpenter and builder; lived at Camp Hill, Cumberland County, from March, 1875, to March, 1878; from spring of 1873 to spring of 1875 lived in Harrisburg. In 1867, 1870 and 1871 was carpenter and contractor; continued in that business for himself up to 1872. In the fall of 1870 built an addition to Mr. Daniel Hart's house at Milltown. While putting up Mr. Hart's house, broke the set screw of his boring machine and took it down to Mr. Drawbaugh's to get him to drill the old screw out and put a new one in; says that he then first saw Drawbaugh's talking machine; says that it was in the basement or lower story, and was taken up to the other story; that is, the wires run up along a window to another story. By the basement the witness means the lowest part of the shop where the water wheel is. Witness says that he listened to Drawbaugh talking through the machine, but did not know as he talked through it himself. Witness says that he was in the basement part of the building; did not know where Drawbaugh was; he was upstairs on the next floor. Witness says that he heard and understood the words that came through the machine; has no recollection what they were. Says that about 1870, and since, so long as he lived at Camp Hill and that neighborhood,

Drawbaugh's talking machine was a matter known and talked of in the community. Witness says that he often heard it spoken of there; cannot say he had heard it spoken of before he saw it at the time when he had the boring machine repaired.

Cross-examined. — The witness says that he was at Eberly's Mills in the winter of 1877–8, before moving to Perry County. Put up an ice house there that winter for H. W. Lewis, which job might have taken three or four days; this was not the only time that witness was at Milltown that winter; could not say how often he was there; might have been half a dozen times; was there frequently between spring of 1875 and the spring of 1878; drove through the town pretty often and went through the town; cannot say when he was in Drawbaugh's shop after the visit to have the boring machine mended; was there frequently afterwards; can give no date for the next time; used to pay little friendly visits to Drawbaugh at his shop when witness happened to be at Eberly's Mills.

The testimony of this witness is another example of the power of arbitrary association or coupling of events. Down to a period as late as the winter of 1877 and 1878 he was a frequent visitor to the shop of Mr. Drawbaugh, with whom he was on intimate and friendly terms. The talking machine, if ever seen, may have been seen at any one of these visits. The only matter for wonder arising out of this piece of testimony is that the witness should have lived so many years near by Mr. Drawbaugh and have been on intimate terms with him and a frequent visitor to his shop; and yet be able to recall but one occasion of listening at or seeing one of the alleged talking machines. He was not asked to identify any of the exhibits and that his testimony contains no attempt to describe what he saw.

He was not called when the defendants were putting in proofs in support of their answer, although he was at that time living within easy access and was one of those to whom it might be supposed Drawbaugh's mind would naturally revert as old acquaintances and long-time neighbors, when he was looking around for testimony.

He is one of the purely cumulative witnesses introduced at a late day and in the surrebuttal, as George May was. He has lived within easy reach, and no reason has been suggested why he should not have been called in chief, if he would have then told the same story.

W. H. Martin (No. 272, p. 668, *supra*) testified that he worked for Abraham May and that, while employed by May, he worked on Walter's barn and on Hart's house, the talking machine was the subject of frequent conversation. Mr. Hart had previously testified that he had never heard of it (p. 478, *supra*); Mr. and Mrs. Wilson Walters have testified that they never heard of it (p. 613 *supra*), and now, May, the employer and contractor, called by the defendants, does not pretend that he ever heard of it from Martin or any of his hands while working on those jobs. He says he saw it. He does not intimate that he ever talked of it.

No. 306. *William W. Snyder*, defts, iii, surbtl, 1066. — Age, sixty-three; Landisburg, Perry County, Pa.; flour milling and farming. Called principally to attack the testimony of complainants' witness, J. C. Zimmerman, connected with the Kissinger ram (complts, i, 622). In this he broke down so completely that the defendants had to enter on the record what was virtually an apology for having called him. Says that he was at Eberly's Mills on Feb. 5, 1873, on a visit to Mr. George Leonard, — Mrs. Leonard being a cousin of witness's wife; visited Drawbaugh's shop at the invitation of Mr. Leonard, who said Drawbaugh was a great genius, or a great machinist, don't recollect which; saw Mr. Drawbaugh, who showed witness two if not three different apparatus.

"There was a cluster on his table that he pretended he was completing; he followed up several explanations, but I can't say what he said they were all intended for, but one, — that I distinctly remember; and that was the talking machine or conversing machine; I can't remember what he called it, or whether he had any particular name for it, but one remark I remember that excited my doubt, and that was that it was intended to surpass the present telegraph system; because he made the remark that he could converse as far as Carlisle; made that remark when I asked him" (ans. 34, p. 1073).

"He must have seen my doubtful appearance, for he became a little fidgety, and said, 'Oh, we have got it to work here on short distances.' To me it seemed so ridiculous that I thought the man was beside himself" (ans. 36, p. 1073).

"I did think he was getting to be a little cranky just on that one subject. I had great sympathy for him; I remember that distinctly" (ans. 39, p. 1074).

"First heard of the Bell telephone in the latter part of 1876 or 1877; read of it. I supposed that it was Drawbaugh's invention bought over or transferred to this gentleman, Bell; that was my impression, ignorantly formed, for a long time" (ans. 41, p. 1074).

Witness is not asked to identify any instruments; nor to repeat the alleged explanations of Drawbaugh as to how the alleged "talking machine" operated. He does not intimate, except, perhaps, by indirect inference, that Drawbaugh said or that witness understood that the thing was an "electrical" instrument; and it seems that Drawbaugh did not undertake to remove witness's doubts by any practical demonstration. Furthermore, it would seem from witness's language that the things shown to him were in an unfinished state. Mr. Leonard was not at the shop with him (ans. 38). He fixes the time by an entry of visit to Mr. Leonard in what he calls his diary,— an *omnum gatherum* of accounts, small incidents, and remarks on the state of the weather, which it seems witness has been for years in the habit of keeping as a substitute for "memory," of which he consequently has none.

But this diary, in which witness has entered all sorts of trifling incidents in his daily life, makes no mention of this alleged visit to Drawbaugh's shop.

Mr. George Leonard was the defendants' witness upon the subject of the talking machine, and was unwilling to say that he had ever heard of it before 1877 (v. p. 238, *supra*). Presumably for the purpose of reconciling his testimony with that of Leonard, Snyder is made to say that his "impression" now is that Mr. Leonard, "after introducing me to Drawbaugh, took his excuse and left us, saying that he would go to the mill"; "my *impression* is, that he wasn't there a very great while."

But it is absurd to suppose that if, as Snyder pretends, he — a chance visitor — learned of the "talking machine" in February, 1873, it would not have been known to Leonard, a resident in the place, a man of property and influence, and with whom Drawbaugh had business dealings until 1876 or 1877. Snyder's testimony shows him to be an ignorant, vain and recklessly loquacious man, endowed with a most treacherous memory and an unreliable "diary."

[illegible] among those which are of great value to the

Snyder's testimony about Zimmerman is enough to stamp the character of the man and of the deposition. Zimmerman had testified that he worked for Snyder at milling for $12 a month from Nov. 16, 1875, until Jan. 26, 1876; that he had an entry in his own book of the time when he began, and that he had recently been to Snyder's mill and fixed the dates also by the entries in Snyder's books. Snyder was called to contradict this, and testified that Zimmerman worked for him in 1873, and says (p. 1067, ans. 6):—

"The next time he came to commence work for me was Tuesday, the fourth day of January, 1876, and worked until Monday, the twenty-fourth day of January, 1876, when he quit and left. These dates are fixed by entries in my book, which I now point out. The book is a kind of a diary, written down by me regularly every evening from day to day, and contains memoranda of the weather and of the time of my employés and so forth."

If that was true it proved that Zimmerman did not work for him either in November or December, 1875. The defendants' counsel wanted to make this a little more sure, and so put a specific question to him, asking him to look at his diary for November, 1875, and state whether it has any entry during that month relating to Zimmerman. To the surprise of counsel, doubtless, the witness pointed out that it did; that it showed that Zimmerman worked for him on the 12th, 13th and 15th; so his book had already contradicted him. But as now read the diary, if true, correct and full, showed that Zimmerman did no work for him between Nov. 15 and Jan. 4. They then had him deny in detail everything that Zimmerman had said about working for Snyder, and particularly they had him swear that Zimmerman did not run his grist mill from Nov. 16, 1875, until Jan. 26, 1876. On cross-examination he was asked who was his miller in December, 1875; and he said, "I will say most positively that I was miller myself, with the assistance of my minor help," that is, his sons (p. 1075). Then he was requested to go home and bring his other books, — his day book and his cash book; and his cross-examination was suspended for that purpose. When he came back after ten days he produced the books, and says that he has examined them, finds no entry therein, and no payment to Zimmerman between Nov. 1, 1875, and Feb. 1, 1876. Looks over them again on the witness stand, and swears that he finds none (x-ans. 57,

p. 1078). Then the cross-examining counsel pointed out to him an entry of Dec. 20, 1875, — cash paid to the shoemaker for boots on account of James Zimmerman, $4.75; and under date of Dec. 23, 1875, cash paid to Reiber on account of James Zimmerman, $1.73. But he said he could not remember what that was for, unless it might be for a few days' jobbing or in the mill. Then he was asked to look again at his book, and this time he found another entry, Dec. 27, 1875, paid Zimmerman $10.69; Jan. 24, paid him $16.15; Tuesday, 25th, paid him $1.80. He had taken a very careful receipt in full from Zimmerman, and on his direct examination was malevolent enough to intimate that he did that because he had heard that Zimmerman needed to be closely watched. As Zimmerman had been in his employ for four or five years, that was obviously simply false. But it now turns out from his own statement that he was the one who needed watching he had not paid Zimmerman enough by $1.80, and paid him the remaining part a couple of days later.

Then he said that his time book showed that Zimmerman worked for him Nov. 12, 13, 15, but not afterwards. Zimmerman said that the fact was, and that the entry in Snyder's book was, that he commenced milling for Snyder, Nov. 16, at $12 a month. Snyder was then asked to look at his book again, and he now found in his day book under date of Nov. 16, 1875, the following entry: "16 James Zimmerman commenced working this morning at $12 per month at the business of milling." So there the whole fact was just as Zimmerman had testified, and the entry in his book was, if not literally, yet in almost the exact language that Zimmerman had testified he found it in. Zimmerman appears to have made a mistake of two days as to the date when he left. Snyder's book had it the 24th and Zimmerman, got it the 26th. That may have been a mere clerical error in copying. We got from Snyder's books the amount he paid Zimmerman and it agrees with the time he says he worked there, about a week being taken out when he went home at Christmas.

Then it appeared (p. 1081) that Henry Drawbaugh called several times on the witness and asked him whether Zimmerman ran his mill from some time in November, 1875, to the 26th of January, 1876. The witness says, with a certain truthfulness this time, "my

But this deposition is among those which are of great value to the

reply to his question was, '*My recollection is somewhat frail of late of anything I have a record of*, but you can go in and look at the books.'" And then the witness had so fully proved that he, not Zimmerman, was the falsifier, that the defendants' counsel naturally wished to clear his skirts of the imputation and throw the blame on the witness and Harry Drawbaugh (the claimant's brother and a runner who has hunted testimony for the defendants), and in answer to his inquiries, the witness stated that when he came down to testify the first time, being asked by counsel whether he had any book except his diary containing entries relating to Zimmerman's work, he replied that he had examined his other books and found nothing in them relating to Zimmerman; although we now know that they had the story there in full.

He got into trouble again about his memory. The defendants wanted to show that there were heavy rains in August, 1873, so they had him read from his diary that on Thursday, the 14th of August, the creek was high and water was in the mill. And he said (p. 1074): —

"*Q.* 42. It has appeared in your deposition that between the 12th and 18th of August, 1873, the water was so high at your place as to come up into your mill; was that a common occurrence at your mill or not?

"*A.* Not; it was unusual; it never occurred since."

On cross-examination he was obliged to read from his diary, that three years after that, to wit, Sept. 18, 1876, the water "was in the mill about two feet," and upon being examined about that he says (p. 1082): —

"*Re-cross Q.* 78. As I understand that entry the water was so high on that occasion as to stand two feet in the mill; is that correct?

"*A.* Yes, sir; I remember that distinctly; it caused me a great deal of trouble.

"*Re-re-direct by Mr. Hill.*

"*Q. Q. Q.* 79. You didn't remember that when you testified in chief, did you?

"*A.* No, sir; I must have misunderstood the interrogatory, and thought it referred to a time subsequent to that time."

Between the first part of this witness's deposition and the last part, when the production of his books broke him down so com-

pletely, ten days elapsed. During that time the defendants had on some other witnesses, his friends and neighbors, and after their usual fashion of getting each one to indorse the other, they had Egolf testify that Snyder was a close neighbor of his and he was particularly acquainted with him, and then (p. 1024): —

"*Q.* 13. As those gentlemen live in a part of the county which is remote from here and from the court where this case will be tried, I would like to have you state what their standing is and their reputation in the community where they live, if you know.

"*A.* Very good; they were considered very fine, good men in our neighborhood there; in fact, among the best."

As the defendants have called Egolf and several others, witnesses from that neighborhood, it is interesting to know that this reckless and worthless Snyder is "among the best" of them.

No. 317. *T. H. Ramsey*, defts, iii, surbtl, 1118. — Age, fifty-eight; Carlisle; formerly justice of the peace there; called to produce his docket entry of an action upon a due bill, brought by Cyrus Bowman against J. B. Drawbaugh, for which see p. 461, *supra*.

No. 321. *William R. Gorgas*, defts, iii, surbtl, 1128. — Age, seventy-seven; Harrisburg; retired farmer; lived in Cumberland County near Milltown over seventy-one years; moved to Harrisburg Nov. 8, 1877; knew Daniel Drawbaugh from childhood.

Mr. Gorgas simply testifies that being in Drawbaugh's shop at some time between 1873 to November, 1877, Drawbaugh said that he had a good thing, and that if witness would take out the patent, he would give him a half interest in it. Don't recollect what it was; witness was losing in the neighborhood of $4,000 in the old faucet and pump business, and had a surfeit of it. Didn't pay any attention to it, that is, to the best of his recollection.

As Drawbaugh does not pretend that he ever applied to Mr. Gorgas for help to patent or introduce the "talking machine," this piece of testimony can only be intended as an excuse for his failure to do so.

But this deposition is among those which are of great value to the

complainants. Mr. Gorgas was a neighbor and old friend of Drawbaugh's and is proved to have been worth about $90,000. (See Mumper, complts, ii, 1100; p. 470, *supra*.) He had lost money in the faucet, but that would be only another reason for advancing the small amount required to patent a telephone in order to obtain a part interest if Drawbaugh ever had one. But this testimony proves that in spite of his losses in the faucet he was the man to whom Drawbaugh actually went to obtain aid about patents. The date of this application is not exactly fixed, but it was plainly after the faucet business had been closed, which was in the summer of 1873, and the time when Mr. Gorgas moved away, which was in the fall of 1877. If Drawbaugh had had an operative telephone before they were patented elsewhere, it is certain that in going to Gorgas to ask for aid about some patent he would have asked him for that, or at least have mentioned that and shown it to him.

We have already referred to the fact that five of the members of the Faucet Company have been called, and none of them know anything about telephones (v. pp. 223, 244, 361, 438). The record is a little stronger than that. The defendants originally and in chief called Hertzler and William L. Gorgas (the son), both members of the company, to testify to other matters, and did not ask them anything about telephones. Then we called John F. Hursh and Henry S. Rupp (pp. 435, 443, *supra*), who testified positively and proved by the records that nothing of the kind was known of during the time of the company. The defendants, after that and in their surrebuttal, put this other active member, Mr. William R. Gorgas, their one-time treasurer, on the stand, and *did not ask him one word about telephones*. Do the defendants expect after this that any court can be found so credulous as to believe that the telephone was a thing which existed in Drawbaugh's shop as an apparatus, operative and successful, and which he was urgently desiring people to take hold of and help him to get a patent upon? If anything were needed after the previous testimony, this performance with Mr. Gorgas, the father, is enough to end controversy on that point.

No. 320. *H. Kilmore*, defts, iii, surbtl, 1124. — Age, fifty; residence, Fairview township, York County, in a locality called Nau-

voo; carriage builder; has lived there twenty years; has known Daniel Drawbaugh for the last thirty years; saw a talking machine instrument about 1867 at Drawbaugh's shop, at that time right back of the grist mill; Michael S. Drorbaugh was with witness at that time; witness was again at Drawbaugh's in June, 1868; did not see any talking machine on that visit. In 1868 the shop was down near the creek near the old clover mill. Witness did not at that time have any particular talk with Drawbaugh about his talking machine; the gentleman who was along with witness, one Stephen Birdsall, asked Drawbaugh whether he thought it ever would amount to anything, and Drawbaugh said that he was fully convinced that there was no trouble about it giving satisfaction.

Drawbaugh was working at the machine at that time; does not remember what he said he was doing with it; said he was going to put it to use for talking from one point to another. Witness was not in Drawbaugh's shop after June, 1868; has seen Daniel Drawbaugh since to talk with him; thinks he has seen him twice, once two years ago at a sale near Lewisburg; another time just before haymaking last year at witness's place. On the first occasion Drawbaugh didn't say anything about the talking machine or about this suit, but did on the last occasion. The witness says that he saw a talking machine at Drawbaugh's shop; saw a tack machine that he was working at, and was just about completing at that time; there was a good many things there that he can't recollect. Saw a drawing of his tack machine. Has known of this suit in the neighborhood of four years; thinks Drawbaugh then told him of it himself at the station at Bridgeport; has heard others talk about this suit of the talking machine within the last two years.

This is simply cumulative testimony based on the seventeen-year-old recollection of a witness who took no particular interest in the matter; if anything can be found in his story which is legally material, then Drawbaugh must have had talking machines during the whole time of the Faucet Company; that he did not is proved beyond question. The witness did not see any attempt to talk through them. Drawbaugh spoke to him of the suit near four years ago, but they did not call him then.

No. 3-6. *Henry N. Bowman*, defts, iii, surbtl, 1135. — He is the justice of the peace who has taken many affidavits for the defence; has lived many years at Camp Hill. Is a brother-in-law of Capt. Moore of the Axle Company (p. 204, *supra*), and son-in-law of Jacob Kline, the inventor of the axle, both of them close neighbors of his, and who carried on business at Drawbaugh's shop from the spring of 1875 to the summer or fall of 1876. If any man could know about the talking machine at Drawbaugh's shop, assuming it to have been matter of general notoriety as is alleged, he would have known of it, and yet they do not ask him a single question on the subject.

They called him to prove the signature and jurat to the alleged affidavit of Dr. Mosser, which they thrust into the record without the pretence of an excuse, during the cross-examination of Mr. Henry S. Rupp (complts, ii, 1146). An objection to the statement contained in that affidavit, apparent and of substance, even if made by a witness on the witness stand and otherwise competent, is that it does not point out nor identify in any way the instrument which it professes to refer to. That defect was specifically pointed out when the paper was introduced, and objection was made upon that ground on the record. The paper stated that the instrument which Dr. Mosser referred to was "before him" while making his affidavit. They called the justice of the peace who took the affidavit and did not ask him what the instrument was that was before the witness at the time.

Again, we have referred several times to the fact that Jacob Kline, inventor of the axle and member of the Axle Company, who would have known most about the talking machine if there had been one there, was not called by the defendants, and that the proof in the record showed that he never heard of any such thing (v. pp. 205, 405, *supra*). To the other facts about him we have to add this, that his son-in-law and neighbor has been extensively employed by the defendants to take affidavits. It was not only under the circumstances to be expected that they would call him, but the fact that under these circumstances they have not called him, is conclusive proof that he knew nothing of the existence of any telephone at Drawbaugh's shop during the year 1875, — the critical year before

the date of the Bell patent. We have elsewhere remarked that if even a fraction of Drawbaugh's story be true, no one present in the shop during that year could by any possibility have failed to know, or knowing, could by any possibility have forgotten the existence of such an apparatus there.

No. 69. *Wilson N. Miller*, defts, iii, surbtl, 398. — Called by the defendants in chief, again by the complainants in reply, is now recalled by the defendants to prove a book entry. (For the whole of this see pp. 218, 498, *supra*.)

Pure Hearsay. — Of the one hundred and ninety-nine witnesses called by defendants in so-called surrebuttal, forty-three testify (so far as their testimony relates to the "talking machine" at all) simply to having heard of it, either from particular individuals, or from alleged common report. It is worthy of note that but two of the forty-three pretend to have heard of the thing from Daniel Drawbaugh himself. Of the whole number, only twelve are produced to rebut the testimony of particular witnesses for complainants. Three, Jacob Miley, George W. Atticks and Henry S. Magonnell, undertake to swear that complainants' witness, John F. Hursh, mentioned the talking machine to them at different times earlier than he testifies that he first had knowledge of it, to wit, in 1878.

No. 156. *Jacob Miley* (defts, iii, surbtl, 170). — Age, fifty-four years; of Fairview, York County; farmer; lived eighteen years on the present farm; have known John F. Hursh thirty-five years, and known Drawbaugh slightly for eighteen years. Eight or ten years ago, in 1873–4–5, along there, not less than eight and probably ten years ago, Hursh first mentioned Drawbaugh's talking machine to me; he came to my place on a Thursday or Friday and asked me to go with him to Hertzler's and Drawbaugh's on a Sunday. He had stated to me that Drawbaugh was working on a speaking machine or talking machine, which is what he called it — talking machine. That is about all; we didn't get to see it; the weather was bad on that Sunday, and we didn't go. When asked by a leading question whether Hursh said something to him about going to see Drawbaugh's talking machine on that occasion, he answers: —

"*A.* 11. He said we would go and see it, — see what it looked like, or something to that amount; I cannot recollect the words exactly.

"*Q.* 11. Did he give you any idea as to what the machine was to be used for; if so, what idea?

"[*Objected to.*]

"*A.* For talking from one place to another."

Witness then said that he knew nothing about the Drawbaugh company carrying on business, but he thinks that Mr. Hursh had a kind of an interest there in something at the time he spoke to him. Thinks he didn't get that information from anything Mr. Hursh said at the time. He is first cousin to Mrs. Hursh, and he and Hursh lived on adjoining farms for a great many years down to 1879, and are intimately acquainted. So far as this witness's testimony tends to prove anything, it tends to prove that Mr. Hursh never mentioned a talking machine to his cousin and next-door neighbor before 1873–4, or '5, or later, and he then spoke of it as something new, and they never referred to the subject again. This is too weak and vague even to make it worth while to recall Hursh to explicitly deny it. (For this, see abstract of *Hursh*, p. 445, *supra*.)

Witness then states that about the same time he was driving down from Mechanicsburg to Shiremanstown and brought Drawbaugh along with him, at nine o'clock in the evening, and he spoke to the witness about his clock and his speaking machine, and invited witness to come to his shop and see them. He told me that he was working at a clock or had it about completed. There is nothing by which the witness pretends to fix dates in any way; time is with him matter of bare unassisted memory, or arbitrary guesswork; he had been to Mechanicsburg attending a meeting of a certain association which he had attended regularly for eighteen or twenty years.

No. 177. *George W. Attícks*, defts, iii, surbtl, 302. — Called principally to prove flood and alleged destruction of bridges in August, 1873, testifies that he has known Hursh for twenty-five years, and is his brother-in-law. Being asked whether he and Hursh ever spoke about Drawbaugh's talking machine, and when, he says (p. 302): —

"*A.* 17. Yes, sir; we did talk about it. To the best of my knowledge, it was between 1875 and 1877.

"*Q.* 18. When you and Mr. Hursh so talked about it, did you inform him that Mr. Drawbaugh had a talking machine, or did he already seem to know the fact and speak to you about it?

"[*Objected to as leading.*]

"*A.* I do not know whether I knew of it before him and I talked, but my impression is that I did. I do not know whether I informed him that Mr. Drawbaugh had a talking machine or whether he seemed to know the fact, — I don't know how that was at all. I do know that we talked about it, and talked of going to Drawbaugh's shop to see his talking machine and to see his electric clock that he was having at that time."

Atticks assigns no reason whatever for thinking or affecting to think that this was between 1875 or 1877; and his coupling of the talking machine with the "electric clock" tends to show that the alleged talk with Hursh, if it ever happened, happened in 1877 or 1878 when the electric clock was a matter of notoriety in the neighborhood. Atticks's testimony — like Miley's, that Hursh talked of going to the shop "to see" the talking machine — goes to show that Hursh had no knowledge of Drawbaugh's talking machine until a late period.

Moreover, Atticks's value as a witness is completely destroyed by his false testimony about the destruction of bridges by the flood of August, 1873.

No. 293. *Henry S. Magonnell*, defts, iii, surbtl, 963. — Another witness on the flood and bridge question, mainly. He also testifies (p. 965) that he knew Hursh for twenty-five years; worked for him and heard him speak of Drawbaugh's talking machines at different times; first, a couple of winters, to the best of his knowledge, before witness was married, which was in November, 1873. *Does not remember what was said on that first occasion.* Had another conversation with Hursh.

"*Q.* 36. State the whole conversation, as far as you remember it.
"*A.* He wanted me to go along over to see the *telephone.*
"*Q.* 37. Was that the name he used for it, — telephone?
"*A.* *That was the name he used, yes, sir.*"

On p. 577, *supra*, we have shown how the defendants' witnesses

proved that the word "telephone" was never used by Drawbaugh or his friends until after the date of the Bell patent.

This was in the winter season; has no idea what year. But the use of the word shows that it was at least as late as the winter 1876–7. Witness having once stated that he cannot remember anything at all of what Hurst said to him when he first spoke of the talking machine, next states that Hursh then said "they talked over a wire" (ans. 42–3, p. 467).

P. 968. "*X Q.* 59. This time when Hursh said they talked over a wire, was that the time when he asked you to go up with him to see it, or not?

"*A.* Yes, sir; to go up and see it."

The respondents, perceiving that it would never do to have the witness testifying that Hurst invited him to go and see a *telephone* two years before 1873, proceeded to correct the matter in this wise: —

"*Q. Q.* 60. Did he ask you to go on two different occasions to go up and see it, or only on one?

"*A.* Yes, sir; he asked me at two different times.

"*Q. Q.* 61. Did he ask you to go up and see it the first time that he spoke to you about it, before you were married?"

To which the witness, forgetting that he had once sworn that he did not remember any of that first conversation, replies, "Yes, sir."

His testimony is confused and contradictory, and with every mark about it of recent talk taking the place of memory. It was a matter which neither concerned nor interested him.

There is no apparent reason for his arbitary assignment of Hursh's first mention of the talking machine to him to the second winter before his marriage.

It does not appear that he was then working for Hursh, or at what particular period or periods he did so work.

If his testimony is to be regarded at all, it proves that when what Drawbaugh had was called a "telephone," that is, at some indefinite time after Mr. Bell's patent, the contrivance was so new to Hursh that he asked a neighbor to go up with him to see it. Miley and Atticks had already proved, if they are to be regarded, that after

the active work of the Faucet Company had ceased the talking machine was new to and had never been seen by Hursh, one of the members. But plainly these three depositions are worthless, except as samples of the defendants' record.

No. 178. *George Martin*, defts, iii, surbtl, 307. — Called mainly to alleged destruction of bridges in 1873; testifies also, in response to leading questions that he first heard talk about Drawbaugh's talking machine while living at Barney Staub's in 1874, and heard a good many people talking about it at that time. No particulars of cir cumstance or persons, are given, nor any reasons for the particular time assigned for the alleged talk.

No. 174. *John Sprenkel*, defts, iii, subtl, 281. — Age, sixty-five years. Called chiefly to testify to flood of 1873. States (p. 282) that he heard Michael Smyser, one of defendants' original witnesses, speak of Daniel Drawbaugh's talking machine while Smyser was employed at the Harrisburg arsenal. What Smyser said on the subject witness does not tell us; nor does he assign any reason at all for his statement that it was while Smyser worked at the arsenal.

Witness is and has been for many years a neighbor of Smyser's at Lisburn, Cumberland County. Under these circumstances it does not add to the credibility of his testimony that he says he did not know that Smyser had testified in this suit, which, with everything connected with it, has been for several years subject of common talk in Cumberland County, and about which witness admits that he has heard a good deal of talk within the last two or three years.

No. 189. *John A. Sprenkel*, defts, iii, surbtl, 364. — Son of the last witness, and called principally about the flood. Lived at Lisburn to April, 1874; from April to August, 1874, at Shiremanstown; and from August, 1874, to the present time, at New Cumberland; school teacher. Testifies in response to leading questions that he heard Drawbaugh's talking machine spoken of while living at Lisburn before April, 1874, by people living there, perhaps two or three years before he moved away, as near as he can remember, and has heard it spoken of at New Cumberland by people living

there ever since he has been there, but more frequently within the last five or six years.

P. 367. "*Q.* 22. While you lived at Lisburn, and during the first two or three years that you lived at New Cumberland, what sort of remarks did you used to hear about Mr. Drawbaugh's devoting his time and labor to a talking machine?

"[*Objected to as inquiring for hearsay, and leading.*]

"*A.* The majority of persons thought that he had better devote his time to inventing something that was more practicable, while some were ready to concede that he was something of a genius, and others thought that he was a foolish old man, silly, half witted.

"*Q.* 23. Did they regard the idea of trying to invent a machine to talk to a distance as evidence that the man was a sort of crank or lunatic?

"[*Same objection.*]

"*A.* *Not believing that such a machine could possibly be invented*, I suppose they so regarded him."

This is most singular testimony to adduce in support of the allegation of the answer that Drawbaugh had reduced his invention to practice at an early date; that it was well known to his neighbors, and that it was only their respect for his right which prevented them from availing themselves of it.

Sprenkel's testimony shows, if anything, that down to 1876 or 1877 Drawbaugh had accomplished nothing; and that his neighbors had no faith that the thing ever could be accomplished.

If Drawbaugh had a practically operative talking machine at the early date contended for, his neighbors would not in 1875 and 1876 have been of opinion that "such a machine could not possibly be invented," or have regarded Drawbaugh as a "crank" or "lunatic." There may be some truth in this man.

Sprenkel's vague recollections of alleged general talk, and as to the period of time during which he had heard such talk, are of no moment, save as the character of the talk, whatever may have been the actual period during which he heard it, indicates knowledge that Drawbaugh had not accomplished anything, and a belief that he never would accomplish anything.

No. 190. *Joshua Gher*, defts, iii, surbtl, 317. — Age, sixty years; farmer; York County, near Lisburn; formerly blacksmith

at Lisburn; called in part about floods. His testimony about telephones is cumulative in character but not in effect. The whole of it is (p. 321): —

"*Q.* 28. Tell us whether you did or did not hear any talk among the people around near where you live about Mr. Daniel Drawbaugh's talking machine, for talking to a distance over wires; and if you did, tell us *as near as you can about* how long ago you first began to hear talk about it.

"[*Objected to as new matter, not rebuttal, as assuming and leading, and as inquiring for vague and uncertain hearsay, not evidence.*]

A. "I did, eight or ten years, *perhaps.*"

Mr. Bell's patent was seven years and nine months old when this witness testified.

No. 184. *George Lefever*, defts, iii, surbtl, 336. — Age, fifty-nine years; farmer; Fairview township, York County. Testifies that he has heard something said in the community where he lives about Daniel Drawbaugh's talking machine; can't fix any time, but it was "quite a number of years ago"; can't tell whether it was before or after the flood which damaged his corn in 1873; and can't tell to what extent the thing was talked about, nor whether it was much or little.

No. 185. *Charles Crone*, defts, iii, surbtl, 338. — This witness appears to have been put in merely as a stop-gap when witnesses were scarce. He is keeper of the hotel in Harrisburg where the defendants boarded their witnesses. His story is that he lived at Camp Hill, which is between one and two miles from Drawbaugh's shop, from the spring of 1874 to the spring of 1875; that while he lived there there used to be talk at the stores Saturday evenings about Daniel Drawbaugh.

"*Q.* 19. What talk did you hear about him in the stores at Camp Hill while you lived there?

"[*Objected to as not in rebuttal and calling for hearsay.*]

"*A.* As regards the telephone.

"*Q.* 20. Yes, as regards the telephone.

"[*Same objection.*]

"*A.* I heard different parties say that it was a great pity that Mr. Drawbaugh did not have the means to have this telephone patented."

It will be remembered that defendants' witnesses proved that Drawbaugh did not call it telephone until two years after that, when he had learned the name from Mr. Bell (v. p. 577, *supra*). The only person he says that he can remember hearing make this remark was Capt. Moore, though he thinks there were other parties said it, whom he can't remember. Upon being asked in terms whether Drawbaugh's telephone or talking machine was not a matter of common notoriety, of course he assents to the proposition and says it was. It is very instructive to contrast this with Capt. Moore's deposition (defts, i, 640; p. 207, *supra*). According to Capt. Moore's testimony the first he ever heard of it was while he was engaged in the manufacture of axles at Drawbaugh's shop, at least as late as May, 1875, and Drawbaugh then spoke to him of it for the first time, and asked for money assistance. This man Crone is prepared to swear that he heard Capt. Moore tell of all this before Capt. Moore knew of it; that is, he heard him tell of it and make common talk about it during the year which ended March, 1875. This is one of the many cases where the testimony for the defendants in their principal case was not quite strong enough or early enough, and in the long interval which elapsed in the preparation of the case, witnesses became enabled to swear more strongly in rebuttal than they did in chief. An attempt is made in surrebuttal to prove by hearsay something which the party concerned had refused to swear to when he was on the stand. Some very extraordinary cases of this kind will be found in connection with Henry Drawbaugh, p. *infra*.

No. 192. *Louis J. Klein*, defts, iii, surbtl, 377. — Age, fifty-two years; Mechanicsburg. April, 1871, to April, 1872, clerked for Daniel Rupp at Shiremanstown. Has known Daniel Drawbaugh since about 1867 or 1868. First heard of the talking machine in December, 1871, in Daniel Rupp's store; Henry Rupp, Sr., Peter C. Zimmerman and witness were present, and took part in the conversation. Zimmerman said that Drawbaugh had a machine he could talk from one room to another with as distinct as we were talking there. Being asked what Mr. Henry Rupp, Sr., said, wit-

ness did not undertake to state what he said, but volunteered the statement that he (Rupp) "appeared to have some knowledge of it."

Witness continued to live in Shiremanstown (about three miles from Milltown) down to 1881.

The witness has known Drawbaugh since 1867 or 1868, but does not pretend to have heard until December, 1871, about the talking machine, which, the defence have tried to show, was long before 1871 a matter of public notoriety at places much more remote from Milltown than Shiremanstown. The witness, though resident of Shiremanstown down to 1881, does not, on his own showing, have any knowledge of the talking machine, save that derived from the isolated piece of alleged tittle tattle to which he testifies. If the talking machine was, in 1871 and later, subject of general talk in the neighborhood, this witness does not seem to have known it.

As to the particulars of his story, the Daniel Rupp mentioned was one of defendants' original witnesses. He was treasurer of the mill bush company, a concern which from 1867 to 1869 or 1870 had its mill bushes made by Drawbaugh in Drawbaugh's shop, and furnished about $1,500 for special tools constructed by Drawbaugh. Rupp had occasion to go there also during the time of the Faucet Company about faucets. Yet Rupp positively testifies that the first time *he* ever saw a talking machine at Drawbaugh's shop was in the summer of 1874 (ans. 5, defts, i, 446; quoted p. 121, *supra*); he does not pretend to have even heard of it before; he further testifies that when on his visit he urged Drawbaugh to get it patented, "Drawbaugh said he had not it completed yet or in shape to get patented" (x-ans. 64, quoted p. 122, *supra*).

The Henry Rupp, Sr., mentioned by Klein, was Daniel Rupp's father, and died about 1872. The testimony of this witness Kline will hardly suffice to overcome the inherent improbability that what the son, a frequent visitor at Drawbaugh's shop, did not know about until 1874, the father knew of in 1871.

Peter C. Zimmerman is one of defendants' original witnesses (defts, i, 432; p. 119, *supra*), and testified that he had been spoken to about Drawbaugh's talking machine in February or March, 1871, and had seen one in that year; did not hear any talk through it, but Drawbaugh made wonderful claims as to what he could accomplish

with it. Zimmerman says he afterwards mentioned the talking machine at Shiremanstown to people, who thought he was crazy. Zimmerman also testified that he was at Drawbaugh's shop once only, though he had been living at Shiremanstown down to the time he testified. As Zimmerman himself expressly says that he never talked or listened at the talking machine, and knew nothing about it, save what Drawbaugh told him, Klein's testimony is only hearsay of hearsay.

It would seem, however, from Klein's testimony, that notwithstanding Zimmerman's faith and zeal, the news of the talking machine did not reach Daniel Rupp's store in Shiremanstown until December, 1871. For Klein is the only witness produced to confirm Zimmerman's statement that he mentioned the talking machine to people in Shiremanstown, and from Daniel Rupp's testimony it appears that the story never reached *his* ears at all.

These pieces of testimony are utterly inconsistent with each other, and with the story elsewhere attempted to be established that at a very early period the talking machine was the common talk of the neighborhood. Klein's account of what Zimmerman said necessarily implies that Zimmerman gave his statement as a piece of news; and that to Klein, at least, it *was* news. Yet, Daniel Rupp, Klein's employer, was at, and long before, and after that very time a frequent visitor at Drawbaugh's shop, and personally interested in work going on there. That under such circumstances he should not have seen, or so far as appears from his testimony, heard of a talking machine until 1874, and that at that time Drawbaugh should have admitted that the machine was not completed and was not in condition to be patented, renders utterly incredible the stories both of Zimmerman and this witness Klein.

No. 193. *Samuel H. Bates*, defts, iii, surbtl, 380. — Age, thirty-six years; Shiremanstown; laborer. He says that Oct. 31, 1866, he went to Milltown out of curiosity to see a man who was dying of hydrophobia. He then testified (p. 380, ans. 1): "Mr. Drawbaugh was going towards Martin Tate's at the time. There was a group of men standing there in front of the grist mill, — I suppose it is; I am not well enough acquainted to know whether it is a grist

mill, — standing there discussing something when I came by. One of the men made this remark: 'Look at Daniel Drawbaugh; personally you wouldn't think there is more in him than a block of wood, and the idea of a man like he to try to invent a talking machine.' One of the others remarked: 'If he is successful in getting it finished he will be the richest man in the valley.' Now then, you have got what I know about the talking machine."

Does this show that the neighbors who are alleged to have afterwards said that Drawbaugh was a fool to keep working on a talking machine thought so because it was not worth having or because they knew that Drawbaugh had not got it, and had no prospect of getting it?

The witness has never been to Drawbaugh's shop, but he says that living at Bridgeport, which is between Drawbaugh's shop and Harrisburg, from the spring of 1869 to the spring of 1876, Drawbaugh's talking machine was frequently talked of by a few persons that he knew. On cross-examination it appears (p. 383) that his recollection is that it was not a matter of common talk at Bridgeport but it was talked of by a few persons only. It finally dwindles down to this: that seated in the barroom of the two taverns on Saturday evening he heard Sweitzer, one tavern keeper, and B. S. Wilder, the other tavern keeper, speak of it, but never joined in the conversation himself, and he never talked with any one about the talking machine. He also says that he heard Sam Zacharias, his employer, who kept the warehouse at Bridgeport, speak of it. This again is hearsay several degrees removed, and as is usual when the defendants introduced that kind of evidence, they do not call Jacob Sweitzer nor Wilder nor Samuel Zacharias.

The witness testifies that in 1878 Jacob Carns told him that he saw Drawbaugh's talking machine when he was working for the Faucet Company. This account is hearsay a good ways removed. Fortunately we have had Jacob Carns as a witness, and he testified that he never knew anything of it while he was working at the Faucet Company. The evidence of this witness, therefore, is that he undertakes to repeat alleged conversations that he has had with or overheard from five people; one of them previously called by us denies it; the defendants do not call any of the others.

No. 178. *A. B. Danner*, defts, iii, surbtl, 402. Age, thirty-six years; West Fairview, Cumberland County; laborer; lived at Milltown in 1873; called principally about the flood of August, 1873, and gives upon that subject testimony shown to be false. Is asked (p. 406): —

"*Q.* 26. *While you lived at Milltown in* 1873, did you, or not, hear Daniel Drawbaugh's talking machine invention spoken of in the community there?

"[*Objected to as leading.*]

"*A.* I heard it spoken of frequently.

"*Q.* 27. Please tell us, also, whether you ever had or had not heard it spoken of before you moved to Milltown.

"[*Same objection.*]

"*A.* I heard it before."

No particulars of circumstance or persons are given, nor does any better reason appear for his allegation that it was while and before he lived at Milltown in 1873 that he heard of the talking machine, than that the questions asked him put the statement into his mouth. Furthermore Danner's credit is destroyed by his false testimony as to the destruction of the Etter & Shanklin bridge in August, 1873. On that subject he testified in substance (p. 405), that visiting the spot on Sunday after the flood, he saw

"part of the footbridge hanging to the Cumberland side of the creek; the balance of the bridge had been swept away by the high water."

The truth is (as shown by defendants' own proofs, when later in the case they had to content themselves with a nearer approach to the truth), that only the inclined gang plank on the York County shore was disturbed by that high water; the entire remainder of the bridge being left intact.

No. 199. *John Blair*, defts, iii, surbtl, 410. — Age, fifty-two years; puddler. The defendants had originally applied to Henry S. Rupp for his knowledge about telephones, and they ascertained from him that he knew nothing about them, though he was a very active member of the Drawbaugh Faucet Company, and not unfrequently at Drawbaugh's shop for many years afterwards. Complainants called him as a witness (pp. 1128–1160), and his testimony was very valuable (v. p. 435, *supra*). The defendants now seek to break

the effect of that by calling this Blair, who testified that at a time which he "*thinks*" was when he lived at Merkles's farm, three miles from Milltown, before April, 1869, he once heard Henry S. Rupp speak of Drawbaugh's talking machine. Worthless as a fifteen-year-old recollection of a casual remark necessarily is, this is peculiarly bad, because the whole history of the Faucet Company, and the substantial lack of proof on behalf of the defendants from those connected with it, show conclusively that no talking machine was ever known, while it continued, to any member of it.

No. 210. *George A. Spangler*, defts, iii, surbtl, 462. — Age, thirty-five; New Cumberland; blacksmith; began learning trade with John K. Taylor at Slate Hill, July, 1868; worked there for Taylor not quite two years, and for E. Kauffman one year; heard of Drawbaugh's talking machine while working at Taylor's; it was frequent talk around; never went to see it; we had talked about going one evening; something occurred, don't know what, that we didn't get off.

Cross-examined. — Has been living at New Cumberland since spring of 1875; before that, three years at Hake's blacksmith shop, about two miles from New Cumberland, and a mile and a half from Eberly's Mills. Is a brother of defendants' witness, David Spangler, Jr.

Thus the witness has been living near Eberly's Mills down to the present time; so that his alleged hearsay knowledge of the "talking machine" may have come to him at a period much later than that which, without any reason assigned, he alleges. Whenever and whatever the alleged "frequent" talk was, it did not excite witness's curiosity sufficiently to induce him to go a mile and a half or two miles to "see."

John K. Taylor, in whose shop he says it was "frequent talk,' testified for defendants (defts, i, 661; p. 215, *supra*), and does not' profess to have heard of the alleged "talking machine" earlier than about 1873 (three years or more after Spangler had left his employ), and then not from any common talk, but from an accidental visit to Drawbaugh's shop.

No. 211. *J. Porter Harris*, defts, iii, surbtl, 465. — Brother of Mrs. Cyrus Bowman; Bowman was miller at Eberly's Mills, April 1, 1874, to March 1, 1876. While visiting there I heard his children speak of Drawbaugh's talking machine; I think it was from the older child, who is now dead, — a daughter; she told me that Drawbaugh had a talking machine; that I could hear it from upstairs down or from down-stairs up. (For this and the witness's error, see Bowman, p. 461, *supra*.)

No. 250. *Frank D. Hackett*, defts, iii, surbtl, 690. — Resides at Newville, and testifies by the procurement of Henry F. Drawbaugh; is a miller; worked at milling at Eberly's Mills in the spring of 1874 for Cyrus Bowman; moved to Eberly's Mills with Bowman; worked there for him six months; never worked at Eberly's Mills afterwards. While I worked there at that time I heard that Drawbaugh had a talking machine; Mr. Bowman and I talked about it; it was a good deal talked about. Mr. Cyrus Bowman's two oldest daughters died after I left him; I think they were buried in 1875.

No. 281. *Mrs. Margaret Swiegert*, defts, iii, surbtl, 869. — Tyrone, Blair County, Pa. Sister of the wife of Cyrus Bowman. While Bowman and his family lived at Eberly's Mills, she visited them at least twice a year, and in one year three times; heard her sister and Mr. Bowman and their children speak of Drawbaugh's talking machine, — the two oldest children, dead now; they were very much excited over it; they said you could talk through it from one house to another; don't know how, but some way by electricity; wanted witness to go see it. They died, as nearly as witness can remember, Christmas of 1875. Both had been invalids some time before they died. They were eighteen and sixteen years old. They came to mention the talking machine and mention electricity in connection with it to witness, because their pa got a battery, and witness had used it on them. Heard Cyrus Bowman say there was such a thing; that Drawbaugh had a talking machine; don't remember him saying anything about the manner in which, or means by which, it was operated. Heard other persons mention the talking machine, but don't remember their names.

The testimony of Harris, Hackett and Mrs. Swiegert is designed to rebut that given by Cyrus Bowman for complainants (complts, i, 666; p. 460, *supra*). Bowman testifies that having lived at Eberly's Mills from April, 1874, to March, 1876, and having been acquainted with Drawbaugh, and a visitor to his shop, he had not seen any talking machine there, nor heard Drawbaugh or any other person mention one.

Since the testimony of Harris, Hackett and Mrs. Swiegert, Bowman has again taken the stand (p. 461, *supra*), and denies their statements, and reiterates his own former testimony, and Mrs. Cyrus Bowman (ib.) has testified to like effect; they state how the error of these witnesses has arisen; it was Drawbaugh's electric clock that was talked of in their family; and this is made certain by the fact that Holsinger, Drawbaugh's most intimate friend, writing a newspaper paragraph about him at that time, November, 1875 (quo ed, p. 107, *supra*), refers to the electric clock as a great wonder, and does not even suggest the existence of a speaking telephone. Bowman and his wife were labored with by the defendants before the complainants first saw them, and after Bowman had testified.

No. 225. *Mrs. Kate Young*, defts, iii, surbtl, 536. — Wife of William Young, daughter of Benjamin Kauffman. Says that about thirtee· or fourteen years ago — which would be about 1870 — she heard her father say Drawbaugh's got a talking machine now; or that he had a machine that he talked through; something like that he was telling her about it. Her father, she says, very often told her about other inventions that Drawbaugh had, — his clock and several other things which she does not remember. She has heard considerable talk during the last two years about this talking machine among her friends and acquaintances, particularly in the family of Mr. John Free of Whitehill.

No. 226. *William Young*, defts, iii, surbtl, 539. — Husband of the foregoing; says that he heard Benjamin Kauffman talk about it in 1871; it was general talk round about Whitehill. Among the people he has heard speak of it are John and George Free, persons whom he has been intimate with down to the present time. It is the

same George Free who has testified for the defendants in this case; he has heard a great deal about this suit since it began.

For these three witnesses see abstract of deposition of B. Kauffman, p. 462, *supra*.

No. 236. *Mrs. Annie M. Reynolds*, defts, iii, surbtl, 612.

No. 238. *Leah Nichols*, defts, iii, surbtl, 731. — Daughter and wife of defendants' witness, Samuel Nichols. For their testimony see abstract of testimony of Samuel and Edward Nichols, pp. 71, 456, *supra*.

No. 245. *George H. Rupley*, defts, iii, surbtl, 659. — Age, twenty-one years. Has lived at West Fairview, Cumberland County, nearly all his life. Between April, 1874, and April, 1877, William C. Frownfelter, a witness for the complainants (complts, ii, 1235; p. 471, *supra*), lived on the farm of my grandfather, John K. Heck, and I lived there also. Wm. Frownfelter told me while living there that Daniel Drawbaugh had a wire strung along the fence above his shop, used for the purpose of speaking or transmitting speech.

The witness was then between eleven and twelve years old. He is now a student at the University of Michigan. In the years 1880 and 1881 he worked for Drawbaugh and Chellis at their shop and owns twenty-five shares of the stock of the People's Telephone Company, the defendant corporation, which he bought from Daniel Drawbaugh in 1881; he does not undertake to give the words Mr. Frownfelter said to him. When asked by the defendants' counsel how certain he is that he has accurately given the substance of Frownfelter's statements, he says, "I have given it as near as I can remember it."

The witness, Frownfelter, cross-examined about this alleged statement, absolutely and unequivocally denied it.

No. 278. *David H. Sheibley*, defts, iii, surbtl, 1020. — Age, forty-eight; residence, Perry County, Pa.; farmer; made the acquaintance of Daniel Drawbaugh in 1873 or 1874; thinks it was the forepart of the summer. Drawbaugh came to the place of wit-

ness's father to reset a force pump which had been bought from him through the agency of Henry F. Drawbaugh. Says that while Drawbaugh was resetting the force pump, witness had a conversation with him in which Drawbaugh told the witness that he had a machine — thinks he called it a talking machine; would not be positive about the name — that would surpass the telegraph in talking to a distance. Witness was in Harrisburg the winter of 1876–7, and also 1877–8, when the telephone was introduced there; he had a brother-in-law in the Western Union office, and he begged witness to go along to see the telephone; thinks it was then connected with the asylum. Witness says that he asked his brother-in-law if that was Drawbaugh's invention; the brother-in-law replied, "No, it was Bell's."

Witness was a member of the Pennsylvania Legislature in the winters named.

Cross-examined.— Drawbaugh was at witness's place to see him last summer, 1883. Came there to see witness relative to his telephone; said he remembered telling witness about it; but did not know whether the witness remembered anything about it.

Assuming this to be true, it would seem to have been a single and singular freak of memory on Drawbaugh's part.

Of all the eleventh-hour witnesses who were called in the "surrebuttal" to testify to hearing of or seeing "talking machines," there is no indication that Drawbaugh himself recollected having exhibited or spoken of "talking machines" to a single one of them save to this man Sheibley, although the circumstances to which many of them testify would, if true, have been very much more likely to have impressed themselves upon the memory than a mere chance talk such as Shiebley testifies to.

No. 271. *B. F. Zimmerman*, defts, iii, surbtl, 822. — Age, thirty-four; Hope Church, Allegheny County, Pa.; lived in Cumberland County from 19th of June, 1866, to 2d September, 1875; at Camp Hill heard Jacob Sadler say it was no use trying to do anything with Dan Drawbaugh, for that he was always working with that damned talking machine. I understood it was at the present time — I mean at the time when he was employed or was

acting as agent for Drawbaugh — that Sadler made that remark at Camp Hill. Heard Wm. W. Sadler and Wilson Walters talking about Drawbaugh's talking machines while I was living at Camp Hill; could not say for sure, but I think Geo. Mumper was present. This was between 1868 and 1873. While I lived at Camp Hill, Drawbaugh's talking machine was the subject of a good deal of talk in the community as a general thing.

Cross examination.—It was at Mr. Eberly's farm at Milltown that I overheard the talk between Mr. Wm. Sadler and Wilson Walters, about the barn or barn yard. It was there at a public sale of the personal property, farming utensils and stock; can't remember the dates. It was either Mr. Eberly or Mr. Wilson; I think his name was Wilson who was going to quit farming. Can't say who was the auctioneer. There were other men in the barn yard, but none that were interested in the conversation between Mr. Sadler and Mr. Wilson. Have no remembrance of any particular person I met there that day. Have several though. There was Hiram Drawbaugh and a great crowd of us playing ball. (His answer being read to him.) Did I say remembrance? That is a mistake. I could go on and mention a good many that I was acquainted with who were there. I was playing ball there with Hiram Drawbaugh for one. Can't give the name of the others who joined in that game.

Of the three, Sadler and Mumper were the complainants' witnesses; Walters was the defendants' witness. All swear that they never heard of it till long after Mr. Bell's patent. (See pp. 468–9, *supra*, and p. 740, *infra*.)

No. 301. *Jacob H. Killmore*, defts, iii, surbtl, 1037. — Age, thirty-eight; Lisburn, Cumberland County, Pa.; carpenter. Knows Abraham May (p. 684, *supra*); worked for him from August to December, 1869, and from April to December, 1870; never worked for him since. First heard of Drawbaugh's talking machine in 1869, from Harry Shoop; also heard W. H. Martin (p. 669, *supra*), John A. Smith and Mr. May speak about it. Heard May speak of it in 1870; heard others at Nauvoo, York County, speak of it, my father, John Killmore, Michael S. Drorbaugh and Henry Kilmore (p. 692, *supra*), all dead but the last named. To a leading question witness

says that the talking machine was a matter of general knowledge and common conversation in the community while he was working for Abraham May in 1869 and 1870.

Harry Shoop was the defendants' witness. He does not pretend to have known of it then (p. 79, *supra*).

No. 310. *George D. Miller*, defts, iii, surbtl, 1097. — Age, thirty-five; resides in Fairview township, York County; trucks a small place of about five acres. First heard of Drawbaugh's talking machine about 1868, from Michael S. Drorbaugh; he told witness that he (Drorbaugh) talked through it in Daniel Drawbaugh's shop. Michael S. Drorbaugh is dead; died 16th of March, 1871.

No. 311. *Adam Drorbaugh*, defts, iii, surbtl, 1100. — Age, fifty-one; residence, Fairview township; farmer. Is second cousin to Daniel Drawbaugh. First heard of Daniel Drawbaugh's talking machine from Michael S. Drorbaugh, some time about 1868,—could not tell exactly; between 1867 and 1869, some time. Michael Drorbaugh was the first person, and about the only person, witness heard speak of Daniel Drawbaugh's talking machine.

H. Kilmore (p. 692, *supra*) testifies that he was at Daniel's shop about 1867 with Michael S. Drorbaugh; that they saw something which Daniel said was a talking machine, but no attempt was made to use it. It is a proved fact that the instruments alleged to have existed then are incapable of talking.

No. 287. *Sam'l Woods*, defts, iii, surbtl, 1107. —Age, fifty-three; Newville; in the business of selling cheese and meat; witness resided in Frankfort township until 1872, served as justice of the peace in that township from the spring of 1867 until 1872; at that time became acquainted with Daniel Drawbaugh, many of whose relations lived there. Drawbaugh and one of the other neighbors came into witness's storeroom; witness thinks they wanted a power of attorney to go to Illinois with; thinks that was their business; he was then justice of the peace and keeping store; thinks it was in the latter part of 1869. Heard of a number of Daniel Drawbaugh's inventions: —

"Stave jointer, or cutter, I think it was called, molasses faucet said to be his and a machine called a talking machine or Drawbaugh's crazy talking machine, as it was very often spoken of there."

Witness states that Drawbaugh's own relations used to speak of the talking machine there occasionally. Witness heard of the talking machine, that it was to be an electric machine used in place of the telegraph to talk to a distance. Witness had a conversation with Drawbaugh in witness's store. Witness thinks he said in the first place, I am using one of your faucets, and then Drawbaugh spoke of the electric machine or what he thought was a talking machine; not able to give everything he said at that time, that is, verbatim.

"I did not pay much attention just at that time; but he continued talking a minute or two, and the only thing that struck my mind or memory or attention at the time was when he said he could carry sound from there to where he lived, could carry sound, or, in the sense we had it, could talk" (ans. 15, p. 1108).

Before that time I heard conversation about the talking machine among Drawbaugh's relatives; the talk varied; "some thought he would invent something, and others thought he was a little off in his mind" (ans. 18, p. 1109).

This is clear proof that, while they did not agree as to what he could do in the future, they, his relations, all knew that he had not then done it.

This witness and the witness Graham are very close neighbors in Newville, the residence of Henry F. Drawbaugh, who procured the testimony of both of them, as well as that of a number of others of the extraordinary witnesses in the so-called "surrebuttal."

No. 315. *John H. Young*, defts, iii, surbtl, 1112. — Age, forty-eight years; resides at Waynesboro, Franklin County; minister of the gospel; was employed in the year 1875 as college agent for Lebanon Valley College; commenced on 1st March, 1875, and ended February, 1876; witness's business was to secure students and money for the college; to that end visited people at their homes, preached in the pulpits, and delivered addresses. In the course of that business had occasion to visit people on the eastern end of Cumberland County. His business brought him at or near Milltown and the region lying

around; knows Daniel Drawbaugh and has known him for thirty-four or thirty-five years; never in his shop.

P. 1112. "*Q.* 10. When you were laboring in Cumberland County in 1875, as college agent, did you hear anything said around among the people there about any inventions of Mr. Drawbaugh's, or not?

"[*Objected to as not rebuttal, as asking for hearsay, and as leading.*]

"*A.* I did.

"*Q.* 11. What inventions of his did you hear spoken of at that time?

"[*Objections continued.*]

"*A.* I remember distinctly of hearing of an electric clock and an electric talking machine which he had invented.

"*Q.* 12. From your own observation at that time, I would inquire whether Drawbaugh's electric talking machine was or was not, in the year 1875, a matter of very general comment and conversation at and around Milltown?

"[*Objected to as not rebuttal, as leading and hearsay, and asking for conclusions, not evidence.*]

"*A.* It was."

This is an interesting example of the mode in which the defendants extracted desired testimony from witnesses by leading questions embodying an assumption as to the material element of time, so that the examination became not at all an inquiry into the independent memory of the witness as to the time, but simply a call upon the witness for assent to counsel's own propositions. How utterly unreliable and artificial testimony extracted in this way is likely to be, may be gathered from the fact which appears in this witness's cross-examination, that from 1876 to 1879 he was living at New Cumberland, a village within two or three miles from Eberly's Mills or Milltown, and in 1879 was living at Newville, Cumberland County, the residence of Daniel Drawbaugh's brother, Henry F. It thus appears that from the year 1876 down to 1880 witness was in a position to have readily heard the talk which these other witnesses testify was going on in those particular places during a considerable part of that period, about Drawbaugh's alleged talking machine; and to lead the witness to associate in his mind talk heard at a period after 1876 with events happening before 1876 of course would be no hard matter. During the time he was living in

New Cumberland, in 1876, 1877 and 1878, he was presiding elder of his church in that district, and presumably, therefore, moving around, to a considerable extent, among the various towns and villages within the district.

The operation is a simple one. Henry Drawbaugh goes to one of these men, and by similar leading talk — precisely the talk that D. Drawbaugh addressed to George May, for example (p. 679, *supra*) — gets him to fancy that he heard of it in 1875; then asks him what he was doing that year, and then says, "It was while you were college agent in 1875 that you heard of this," and the witness knowing that he was college agent in 1875, assents, and the statement becomes crystallized in his mind. The vice of this is that the supposed association is the last and top story of the edifice and not the foundation; and the worst of this old and proverbial mode of manufacturing testimony — for it is nothing less, when all that is material is the date — is that the witness himself presently believes that his date rests on the association of two facts; and as usual, where the witness is himself deceived by a process so simple yet effective, cross-examination does not disturb him; it is only occasionally that some fortunate accident will reveal a true association of facts, and then he is destroyed; as, for example, in the case of George May (p. 679, *supra*), who, on the occasion of the only exhibition of telephones, saw one (H) which did not exist until long afterwards; or where, as is the case of D. B. Musser (p. 88, *supra*), and others, the rooms they were in were not built until afterwards; or where, as in the case of Urias Nichols (p. 28, *supra*), the visit was in consequence of a newspaper publication not made until three years after the time alleged.

But in most cases, as with this witness where his deposition deals only in generalities, and the matter might have occurred at any time, it is impossible to test him or to expose him.

No. 316. *John A. Smith*, defts, iii, surbtl, 1114. — Age, forty-seven; hotel keeper at Bridgeport, between Eberly's Mills and Harrisburg, since 1876; before that lived at Camp Hill; moved to Camp Hill in the spring of 1872; lived there until he moved to Bridgeport — four years. While living at Camp Hill carried on butchering;

before that lived at Oyster's Farm, near Oyster's Point. Has known Daniel Drawbaugh about twenty years; knows Abraham May; while witness lived at Camp Hill he and May went to Milltown together. Witness went to Eberly's grist mill, and does not know where Mr. May went; May returned to witness while he was at the grist mill and said he had been down to see Mr. Drawbaugh's talking machine; witness heard May speak of the talking machine at several times, but does not know whether it was before or after this occasion. Witness knows Jacob H. Kilmore; he used to work for Mr. May, and witness says that he heard Kilmore say something about Drawbaugh's talking machine. Says that about 1872, or the beginning of 1873, while living at Camp Hill, frequently heard about the talking machine in May's carpenter shop; has frequently heard the talking machine spoken of in his barroom at Bridgeport. Witness's hotel is about two miles from Eberly's Mills.

No. 318. *W. James Dale*, defts, iii, surbtl, 1119. — Age, thirty-three; Carlisle; merchant. Has heard of Daniel Drawbaugh's talking machine; first heard of it in Carlisle; *thinks* it was between the latter part of 1873 and the early part of 1874; is *almost* positive it was not as late as the beginning of 1875. Mr. George Emig mentioned the subject to witness. Mr. Emig is an attorney at law, and is now in some portion of the Western country. Cross-examined. — Mr. Emig resided in Carlisle until within three years last past.

As to this piece of testimony, it is only necessary to observe that no reasons are assigned for witness's impressions as to the time of a communication which may have been made to him as late as 1881, nor the slightest possible reason for not calling Emig if there is any truth in the story.

No. 327. *Thomas R. Bergner*, defts, iii, surbtl, 1137. — Age, forty-five; Plainfield, Cumberland County; miller. Lived at Shiremanstown from Oct. 21, 1865, to April, 1869. Acquainted with Drawbaugh since late in 1857. Heard that Drawbaugh had a talking machine; was living in Shiremanstown when he heard it. Recollection is that he heard it more than once during the latter part of his living there; that the novelty of the thing was talked over a

good deal at that time; could not be more specific. Mr. Drawbaugh invited witness to see it at one time; never saw it, at any time; couldn't specify any others besides Drawbaugh who spoke of it, — that is, any particular case.

Cross-examined. — Was last at Milltown some time during March, 1869. Was a member of Teahl's Millbush Company. Had been to see Mr. Teahl, and on returning home stopped to see some machinery which was being made for the Bush Company by a company which was organized, under the supervision of Mr. Drawbaugh, for making faucets and pumps, at Milltown. Was connected with the Millbush Company from June 17, 1868, to February, 1869, and has a distinct recollection of having been at Drawbaugh's shop twice while so connected.

As it is part of the story set up for Drawbaugh that he had a practically operative talking machine as early as 1867 or 1868, this witness's positive statement that he was at Drawbaugh's shop twice after June, 1868, but never saw a talking machine there, is infinitely more telling and forcible than are his vague recollections of what he says he heard. No member of the Millbush Company ever saw a telephone while that company existed (see body of brief, and pp. 121, 468, *supra*).

Henry F. Drawbaugh's moral suicide. — We now come to a group of witnesses produced, at the last moment, by the procurement of Henry T. Drawbaugh, Daniel Drawbaugh's brother. They illustrate in the strongest way the facility with which defendants could procure and the eagerness with which they adopted all manner of incongruous stuff in the way of evidence in apparent support of their case.

Henry F. Drawbaugh's own testimony in his brother's behalf was, it will be remembered, substantially that his *first* knowledge of the talking machines was in or about August, 1872 (see the quotation, p. 113, *supra*); and that from that time down to 1879, Daniel was repeatedly urging him to "go in with him and furnish means for this invention," but that he as repeatedly refused to do so; was "fearful he could not get his money out, and would not get it back"; "did

not think there was any money in a machine by which one man could talk to another a long distance off."

This was absolute proof that no speaking telephone existed there before, for Henry testified in another case that he was a constant visitor at his brother's shop during the years 1869–1872. Egolf, defendants' witness, swears that he and Henry had a distillery together in Perry County from some time in 1869 until December, 1872, and in the Faucet case Henry swore (complts, iv, exhibits, 118, x-ans. 13) : —

"The two years I was in Perry County I got all my work made at his shop that they could do for my distillery, and I was there as often as twice a week. I don't mean that I was there twice every week."

Neither he nor Daniel could come back to swear to anything different; they did not; but the defence felt that this gave the lie to the first five years of the story they had sworn to, and so they tried hearsay.

This same Henry F. Drawbaugh now finds among his old acquaintances, and procures to testify, seven men willing to swear that he spoke about his brother's talking machine to them at times which six of the seven fix as from three to five years earlier than he himself pretends to have had any knowledge of the thing. Not only that, but the whole seven swear in terms so identical as to show that they have been cast in the same mould; that when Henry Drawbaugh spoke of the talking machine to them he did so in the most enthusiastic terms, as of an accomplished and fixed fact, and that he himself had talked through, and as an invention destined in a very little while to supersede telegraphing, but he has not the assurance to come forward and swear to this; like the augurs of later Rome, he wants others to do the believing and swearing it.

No. 299. *Aaron M. Egolf*, defts, iii, surbtl, 1023. — Age, seventy; resides at Tyrone township, Perry County, Pa.; retired farmer; was engaged in the distilling business with Henry F. Drawbaugh from 1869 to December, 1872; never connected with him in any business since; remembers Henry F. Drawbaugh having an apple-grinding cylinder made at Daniel Drawbaugh's shop; it was

about the beginning of August, 1872, when we entered into manufacturing apple whiskey; heard of Daniel Drawbaugh's invention of the talking machine in quite the latter part of 1872; Harry Drawbaugh came to witness's house and told him of it; in conversation, it came around that telegraphing was nothing now no more; that his brother had invented a talking machine, by which persons at different places could talk personally to each other; said the machine had actually been made and talked through. If this is to be taken at all, it is proof that Henry Drawbaugh had just heard of it for the first time. When witness heard of the Bell telephone, knew no better than that it was decidedly the very thing Drawbaugh invented, and now handed into Bell's hands. At the time Henry Drawbaugh told witness about his brother's talking machine, he and witness were still in copartnership. Had nothing to do, but had a little whiskey between them that belonged to the firm. W. W. Snyder (*q. v.* p. 686, *supra*) is one of the best men in our community.

After that Snyder was proved out of his own books to be a reckless falsifier.

Cross-examined. — When Henry Drawbaugh spoke to witness of his brother's talking machine there was nothing said about the doing away with the telegraph; this was said, the telegraph was nothing now no more, that his brother now had made a talking machine that they already had completed to talk from house to house to each other, and by having a wire further they could talk to any distance. [It has been proved by actual test that this cannot be done with any instrument alleged to have then existed.] Henry Drawbaugh expressed himself that he thought this talking machine of his brother's was something more wonderful and handier than the telegraph. Henry Drawbaugh had visited the witness at his house the Wednesday before witness testified; might have been there altogether two hours. They had quite a little talk. Harry Drawbaugh also visited witness at his house several months previously on his way to Sheibley's.

No. 304. *Jacob A. Graham*, defts, iii, surbtl, 1057. — Age, fifty; residence, Newville; not in any business at present; has been hotel keeper. Judging from his cross-examination, has been in a great

variety of businesses and in many different parts of the country, seemingly sticking to nothing long. Heard that Drawbaugh had a talking machine at his shop at Eberly's Mills; heard this from his brother Henry F. Drawbaugh in 1867 at Ahl's distillery; witness was whiskey inspector, and while H. F. Drawbaugh was warehouse keeper, Henry F. Drawbaugh brought some faucets to the distillery which he said were the invention of his brother. Witness spoke of this as an ingenious appliance for the purpose; Harry made the remark that it was not anything to what his brother had invented; then the witness said, "What has he got, Harry?" and Harry replied, "He has got a talking machine"; witness asked Harry how they used it. He described it as one man going to the garret and another to the cellar, or to any part of the house, or from one house to another; and went on to describe it by saying that one man put one end of it to his ear and the other man talked into the other end of it; he went on describing, until I said, "Harry, you will be as crazy as Dan, if you keep on," and he said, "You will see; it will take the place of telegraphing in the next five years"; witness said, "You and Dan are both crazy."

All the comment which this precious piece of testimony calls for is that the communication which the witness alleges to have been made to him by Henry F. Drawbaugh was made, according to his statements, five or six years before Henry F. Drawbaugh himself pretends to have had any knowledge of the talking machine and five years before the date Henry positively swears to as the first time he saw one; and it has been proved that the machines alleged to exist then could not do what is stated. Five years afterwards H. F. Drawbaugh is said to have made the same communication, as a piece of news, to Egolf, then three years his partner.

No. 305. *George Murphy, Jr.*, defts, iii, surbtl, 1063. — Age, forty-four; Newville; shoemaker. Gives testimony having a strong family resemblance to that of Graham, and evidently a growth from the same original inspiration.

Henry Drawbaugh told him of his brother's talking machine in April, 1867, he thinks, at Ahl & Snyder's distillery, under circum-

stances precisely the same as those testified to by Graham, though not so far, as appears on the same occasion.

Henry Drawbaugh said that the molasses faucet was nothing; that his brother had a talking machine at home; said they could talk by it from room to room or from garret to cellar. Witness said to him, "Harry, you must be crazy"; he said, "It will take the place of the telegraph after a while." Witness heard Harry Drawbaugh talk several times about it afterwards. Thinks that is pretty near all he knows about the machine. Witness just happened to drop into the distillery office from work; when he heard this, was running the engine of the distillery; continued to run it until June 1, 1867.

No. 307. *George S. Bricker*, defts, iii, surbtl, 1083. — Another resident of Newville; age, thirty-nine; buying timber at the present time. Has known Harry Drawbaugh since 1863 or 1864; heard him speak of his brother's faucet, talking machine and clock; told witness about his brother's talking machine in September, 1869, at witness's home in Newville; told witness that "his brother had a good thing called a talking machine; told me he *had it in use* about his shop or home; don't know where his residence was, but at his home; I don't know whether he said Eberly's Mills or the other place." Went on to tell witness that as soon as they would get it completed they were going to use it in place of the telegraph. Why I say "the other place" is because I don't know which of the two places Daniel Drawbaugh lived at, — Eberly's Mills or Milltown. Witness alleges that he fixes September, 1869, as the date of this communication, by reason of being home on a visit from Jersey Shore, Lycoming County, where he had been running some county lines and other land surveying; done a little work at Ram's Camp and then went on to Clinton and Potter County line next. After Henry F. Drawbaugh had told witness about his brother Daniel's talking machine, witness communicated what he said about it to the surveyors when they were out on the Potter and Clinton line; the surveyors were A. H. McHenry and son, and Mr. Spafford and a couple of axe men. The subject was spoken of at different times, of it being an invention that would take the place of telegraphing. "At one time Wm. McHenry and I were talking

about that we ought to have one to send after our packmen; they got lost some place and didn't get to us with our grub. All the parties made light of it; didn't think it would amount to anything except Mr. A. H. McHenry, the old man, and he thought that it would."

Cross-examined. — Does not believe that Henry F. Drawbaugh ever talked to him about his brother's talking machine at any other time than September, 1869, until this suit, and then Henry Drawbaugh's conversation was that his brother and this company had a suit about it, and that Dan was going to gain it, or something to that effect. Henry F. Drawbaugh told witness about his brother's clock and faucet the same time he told him about the talking machine; did not describe the clock to witness, only that he had a new kind of clock; don't know whether he told witness it kept good time or not; if witness remembers right it was an electric arrangement to run with wires somehow from the earth, but how witness does not know (p. 1087). Henry Drawbaugh "said he had talked through it (his brother's talking machine), and that you could hear it at the other end — hear everything he would say," and (ans. 30, p. 1087) you could understand what was said as well as hear the noise; did not specify any number of times that he had talked through it; said "he used it; he did not say whether he had used it once, twice or how often." Witness has had no particular occupation since 1869; has been civil engineer he supposes most of the time, his part of the civil engineering being that he carries the chain (ans. 36, p. 1088); his home has been in Newville all the time for the last five years. It was some time during the last summer that Henry Drawbaugh first mentioned to witness the suit was going on; thinks Harry Drawbaugh first mentioned to witness the suit was going on, described to witness what kind of a thing his brother's talking machine was; witness can't remember how it was constructed.

James M. Spafford and *A. H. McHenry* are called to testify that Bricker mentioned the talking machine to them at the time and under the circumstances stated by Bricker.

No. 308. *James M. Spafford*, defts, iii, surbtl, 1089. — Age, forty; resides near Condersport, Potter County; merchandising,

and has been for the last ten years, or about that. Before that was surveying; was commissioner on the part of Potter County to re-run and revive the northern boundary of Clinton County, between Clinton and Potter, under an Act of Legislature approved April 3, 1869. Witness entered upon the duties imposed upon him by the provisions of that Act in October of the same year; was engaged in the work about ten or eleven days. For chain carriers had a young man by the name of Bricker, the last witness, and a young son of McHenry; had never met Mr. Bricker before, and did not see him again after the survey was completed until the morning before testifying. Recollects the conversation during the progress of the survey about the talking machine. Bricker was telling that some one had invented a talking machine; that persons could talk with it a long distance or some distance; after that it was alluded to by different ones in the party a few times; he could not know how many,— perhaps two or three times; perhaps more. One time particularly remembers young McHenry spoke to Bricker and said to him, "If we had your talking machine now we could talk back to Kettle Creek and see what they are doing there; that was the place where we had stayed over Sunday. Bricker replied that we would have to have wire attached to talk over, or something to that effect; then it was alluded to at other times in joking and jesting ways, the party doubted the truth of it. Don't remember that Mr. Bricker mentioned the name of the man who had invented the talking machine; understood that it was some one that Bricker knew, and that he lived down the Susquehanna River somewheres. This conversation had recurred to witness's mind after he began to hear and read about the telephone, — the mere fact that that was mentioned occurred to him. The first that he heard of the telephone being an established fact was an account that he read that they had been hearing music from Boston over a distance of about twenty miles, and then it occurred to him that it was the same thing that had been talked about.

No. 309. *A. H. McHenry*, defts, iii, surbtl, 1092. — Age, seventy; Jersey Shore, Lycoming County; occupation, surveyor and engineer; was a fellow commissioner with the last witness to revive and re-run the northern boundery of Clinton County between Clinton and

Potter. While engaged upon the Potter and Clinton boundary line survey witness says that he heard George Bricker and witness's son William for the first time mention the talking machine on Monday, the 25th of October. "They were talking, William seemed to treat it as a joke; I paid but little attention to it; they were behind me. I asked George Bricker how it was brought into action to convey sounds—or language I think was the idea. Bricker remarked that it was by the attachment of wires. My impression is—but I don't recollect whether it was there or further on the next night—that he mentioned the name of the inventor, which I now think was Drawbaugh, but I soon forgot the identical name and I don't think that I ever was able to recall it until I met Mr. Henry F. Drawbaugh. Bricker remarked that the inventor lived in Cumberland County." Witness tells a story to the effect that George Bricker and witness's son William had a talk while waiting for some provisions to be brought to them, and that his son remarked to Bricker, "If we had your talking machine and could connect with Quigle, would not we give it to him?" That is the last of anything that he recollects about the talking machine on that route. Witness or Jasper Spafford asked Bricker the question how far he could communicate sound or talk or something of that kind; that was the idea; and Bricker said all around, implying that it was limitless; that was the impression that it made on his mind; he didn't use those words.

This witness while testifiying held in his hand a blank book which on cross-examination turned out to be a written statement of almost his entire testimony; and witness admitted that this document was written about a week before giving his testimony.

The testimony of Bricker is mere hearsay; that of Spafford and McHenry is hearsay of hearsay. If competent proof at all, it is only to show that Drawbaugh thought of making a talking machine, not that he had one that would talk. It is not only incompetent for this purpose, but its falsity in this respect is enough to destroy all that class of attempted proof, and should require the Court to reject these depositions for all purposes. Taken at their face value, they prove, if they prove anything, that before September, 1869, Drawbaugh had *in use*, at his shop or home, a practical talking machine, which would transmit so well that everything said at one end would be

understood at the other, through which Henry F. Drawbaugh had himself talked; and that Henry believed it would take the place of the telegraph. The Court knows, from the test of the so-called reproductions, that the statement of results is literally and substantially entirely untrue; Henry Drawbaugh, testifying after a year of preparation, swore positively that the first time he ever saw the instruments was in July, 1872, so that is the recollection of Henry and Daniel, which they have never retracted; Egolf, partner with H. F. Drawbaugh, 1869–1872, swears that Henry mentioned the subject in 1872 in a manner which shows it was then a novelty.

Plainly the truth of the matter is that after Henry had testified that his first knowledge was in 1872, the defendants realized that no Court would be credulous enough to believe that Daniel had an operative machine in 1867 or 1868; neither Henry nor Daniel had the assurance to assert any earlier date for Henry's knowledge, and so were not called; and they sought out gossip.

No. 312. *William North*, defts, iii, surbtl, 1102. — Age, sixty-two; Newville; blacksmith; engaged in that business since 1848; has known Henry F. Drawbaugh slightly for thirty years, but for twenty years been more closely acquainted. Witness testified that H. F. Drawbaugh told him of an electric clock and an electric talking machine at a time which witness states was prior to July 25, 1870, which date happens to be that of a business letter from witness to Mr. H. F. Drawbaugh, which witness identifies and is offered in evidence.

There is no earthly connection between the subject of the letter and the electric clocks or electric talking machine, nor is any reason made to appear why the two are connected in the witness's mind or in his testimony. The witness has been living in the same town with H. F. Drawbaugh down to the present time, and admits that he and Henry F. Drawbaugh have had a good many business transactions with each other during the last three or four years, and that these business matters have brought Mr. Drawbaugh to his shop every now and then during that period. This sufficiently explains the witness's testimony.

No. 313. *Samuel North*, defts, iii, surbtl, 1105. — Age, thirty-two; resides at Newville; a blacksmith; son of the last-named witness, with whose testimony his own is, of course, in substantial accord. The son undertakes, however, to do what the father did not, that is, to repeat some of Henry Drawbaugh's alleged statements; witness said that Henry Drawbaugh stated that the talking machine would take the place of telegraphing and be cheaper.

No. 324. *John S. Dougherty*, defts, iii, surbtl, 1131. — Age, forty-six; residence, Newville; merchant and travelling salesman. Testifies that he went to Drawbaugh's shop in May, 1868, and could not obtain admittance, Mr. Drawbaugh being absent. Went to see what was regularly denominated an invention of Mr. Daniel Drawbaugh's, denominated the talking machine. Had heard of the talking machine in the early spring of 1867, from Mr. Harry Drawbaugh, Mr. Lewis, Mr. C. Eberly and others in common, at Shiremanstown and Mechanicsburg. What I mean by "in common" is that it was common talk.

Cross-examined. — Witness has been acting as travelling salesman since February, 1868, and the business carried him over Cumberland and other counties; was at Eberly's Mills perhaps five or six times between 1868 and 1870 and 1871, but never appears to have renewed his effort to see the talking machine. The fact that this piece of testimony makes Henry F. Drawbaugh talk about talking machines five years before he himself pretends to have had knowledge of them is enough to say on the subject.

ABSTRACT OF COMPLAINANTS' PROOFS IN REJOINDER.

After the complainants had finished their proofs in reply, the defendants began proofs in rebuttal and examined one hundred and ninety-nine witnesses. The complainants then began proofs in rejoinder at Philadelphia, April 10, 1884, and completed the same at Philadelphia, May 24, 1884. Various objections were made by the defendants to certain parts of this testimony upon the theory that it was not in rejoinder to their surrebuttal, but all these objections are ill founded. In the first place, most of the complainants' proofs in rejoinder were specifically directed to certain lines of proof in surrebuttal. But, moreover, in their so-called surrebuttal the defendants introduced a great deal of purely cumulative testimony upon several points. They introduced new and fresh witnesses upon the subject of the alleged talking machine, and from them they obtained testimony purely cumulative in its character, not in any sense directed specifically to proofs introduced by the complainants in reply. This was an entire reopening of the case and entitled the complainants to put in any testimony tending to show that Drawbaugh was not the first inventor of the speaking telephone.

Upon the subject of the Draper-Kissinger ram, the defendants, in opening the case, had asked their witness, Thomas Draper, the date of the visit when he both saw a telephone and ordered a ram, and had specifically asked him the following question (defts, ii, p. 1165, q. 9): "Do you know when that ram was put on to the farm?" In answer to which Mr. Draper gave a date. The defendants rested upon that. The complainants then in reply introduced evidence tending to show that the ram was not ordered in 1874 and put in in 1875, as Draper in his ninth answer testified, but was, in fact, ordered in 1877 and put in in 1878; this was material, because Draper swore in substance that the ram was put in not more than one year or one season after the time when it was ordered, and Kissinger, a witness called for the complainants, who was present with Draper at the time the ram was ordered, also so testifies. In their so-called surrebuttal,

the defendants, not being satisfied with the weight of the testimony as it then stood, introduced the additional testimony of fifty-two witnesses tending more or less directly or purporting to tend to support and confirm Draper in each of his answers which named the dates. Such testimony was, of course, purely cumulative, reopened the case afresh, and entitled the complainants to introduce more proof on that topic.

But that was not all that the defendants did. Mr. Draper's testimony was, that the ram was put in in 1875. The defendants entirely abandoned that and undertook to have their witnesses swear that the ram was put in in the fall of 1876 and not before. That was a new departure, and therefore authorized the complainants to introduce new proof about the date. The complainants' witnesses in rejoinder about the ram were mostly directed to specific portions of the testimony of these fifty-two witnesses. There were a few of the complainants' witnesses in rejoinder whose depositions might in one sense be considered cumulative, and might equally well be considered in direct reply to the defendants' surrebuttal, but in either view of them they were competent for the reasons stated.

The question of the bridges over the Yellowbreeches. In their opening case, the defendants asked their witness, E. B. Hoffman, the following question and obtained the following answer (defts, i, 503) : —

"*Q.* 9. Do you recollect a freshet that occurred in that locality some years after the time you have referred to, which washed away several bridges in the Yellowbreeches Creek?

"*A.* I do; there was a freshet in 1873, in the latter part of the summer; I can't remember the exact time; I was on the creek at the time; it washed away the footbridge at the mill, known as Ditler's mill at that time; and also the red bridge up at Heck's."

They undertook to connect that occurrence with a visit of Hoffman to Drawbaugh's shop, at which visit he said he saw some speaking telephones. They rested the date of the freshet and the extent of damage done by it on Hoffman's answer to that question, and called no witnesses to support him. Whereupon we called some testimony in reply which tended to show that the occurrence stated by him did not take place, and if that were true he was a very bad and very worthless witness. In their so-called surrebuttal, they called thirty-

four witnesses, not to rebut specific statements made by our witnesses on the subject of the bridges, but as cumulative witnesses whose depostions were useless if Hoffman's were believed, and whose testimony, therefore, was merely cumulative to what he had sworn to in chief and upon his direct examination. They did more than that. Hoffman had sworn to the destruction of two bridges; the witnesses called by the defendants swore to the destruction of four bridges or five bridges. In rejoinder to that the complainants called witnesses to prove that none of the bridges named were swept away at the time alleged or by the freshet referred to. So far as this related to bridges not mentioned by Hoffman, it was of course competent because it touched new matter first introduced by the defendants in their so-called surrebuttal; so far as it related to those bridges mentioned by Hoffman, it was competent because the defendants had introduced cumulative testimony upon that point. Moreover, most of the witnesses called by the complainants in rejoinder were directed to specific matters for the first time sworn to by the defendants' witnesses in their surrebuttal and to specific attacks upon those witnesses, such, for example, as proving that a witness for the defence who said that he was at a certain place and saw a bridge carried away at a certain time, was not at that place during that season, or had mistaken the occurrence of another year for the year he swore to, etc.

The matter of the ram and the bridges are considered separately elsewhere in the brief. They have a peculiar value in this case, for they afford samples of the manner in which the defendants obtains and presents proofs — or what they called proofs — to the Court. They presented proofs about the carrying away of the bridges from persons who swore that they were eye-witnesses, and those proofs were, in their nature or character, just like those which they presented for the speaking telephone. But we proved, beyond the possibility of question, by the deposition of every man whose business it was to know whether the bridges were carried away or not, and to repair them if they were, by the deposition of every official connected with them and living, that the bridges were not carried away by the freshet named.

The defendants called a great many witnesses who swore posi-

tively that at a certain named time they saw either the preparation for the ram going on or the ram itself in and in operation. And if their testimony was to be believed for its face value, the ram was put in and working in the fall of 1876. But all these witnesses were mere bystanders, loafers or casual visitors, who had no occasion to interest themselves about the matter or to fix in their minds anything connected with it. In two or three cases there seemed to be a logical connection between their supposed knowledge of the ram and other facts, the dates of which were well proved, but in every such instance the link between the ascertained date of a known fact and the alleged date of the ram was a link which depended merely upon memory.

On the other hand, the complainants proved by the testimony of every person who had any connection or interest in the ram, and by every paper which mentioned that ram or referred to it or referred to anything confessedly connected with it, that it was not put in until the fall of 1878. The complainants proved this by the testimony of Draper himself, the owner of the farm, and of his wife and daughter; of Kissinger, the tenant of the farm, and his family; Foulk, the former agent of Draper for the care of the farm; Eppler, the agent of Draper for the care of the farm at the time the ram was put in; the railroad books which recorded the receipt of the pipe with which the ram was connected, and the only pipe that any one ever saw there or ever traced as going there; by the book and account of the man who stoned up the pit around it, and which specially mentioned that the work was on the "ram"; and, finally, by a letter of Draper himself, written in December, 1877, mentioning the ram in a complaint of enumerated things which Kissinger ought to have put in, and had not. These and other proofs left it clear, beyond the possibility of question, that the ram was not put in until the fall of 1878, and that the whole mass of testimony elicited by the defendants from witnesses who rested merely on their recollection, — though in some cases they were witnesses who swore that they left town before 1878, — was either a falsehood or based on misrecollection or error of some kind.

A large number of the witnesses who had testified in favor of the defendants about the ram came back upon the stand and not only

acknowledged that they were wrong in the dates which they assigned, but, in most cases, proved by papers or by indisputable facts that they were wrong, and that the ram was not put in until 1878.

Now the conflict about this ram was very much the same as the conflict about the telephone. The casual visitors and bystanders, who had no interest in it, were ready to swear for the defendants; the men whose business was such that they must have known of it, and acted upon that knowledge, and every paper which connected itself with the ram, proved the case in favor of the complainants.

We treated the bridge question in the same way. We proved by the county record that Hoffman's assertion about the coun'y bridge — called by him "the red bridge at Heck's" — was widely wrong. The bridge of that name was on another stream eight miles away, and was not carried off until February, 1881, and the bridge on the Yellowbreeches which he had probably confounded with it (Hake's bridge) had always been white and had not been carried away for twenty years. They abandoned that.

We observed that the defendants called casual bystanders about the footbridges, — and they swore as strongly as witnesses have done about the talking machine,— but that they did not call the town officials whose duty it was to rebuild them when carried away, nor the owners or millers of the mills alongside of which each was, nor, until the very end, the farmers on whose land they were, nor any one who had pretended to have rebuilt them. But at the end of their proofs they did call the Spanglers, on whose farm the important footbridge abutted, and we learned from them that the bridge which sundry alleged bystanders asserted had entirely gone, and was not replaced for many months, was not injured at all; that only the gang plank or walk which led up to one end of it was washed away, and temporarily replaced by this farmer in a day or two; and when they put on the stand a workman who made the final repairs for the town, he confirmed this. So we called all the supervisors who were living and the boss carpenter, and they produced their books and their lumber bills, and overthrew the defendants' story; and we found that before calling their falsifying witnesses *they had seen most of these officials and their books and rejected them.*

The defendants had introduced many cumulative depositions about

the talking machine; many of these new witnesses alleged that they had heard it spoken of; others, that they had seen it or talked through it; one (Hosler, p. 652, *supra*) said that no man could have been in the neighborhood without hearing of it. Among those whose depositions are purely cumulative, are Heiges, Mr. and Mrs. Eicholtz, Graybill, A. Kahney, Hamme, Frederick, Fry, Crone, Fox, Holer, Klein, E. Ditlow, Snell, Davis, Schrader, Dunlap, Chambers, McLaughlin, father and son, Vanasdale, Ensminger, McLeaf, Martin, Keefauver, Eyster, G. May, A. May, Goodyear, Sheibley, Egolf, Kilmore, Graham, Murphy, Bricker, Spafford, McHenry, G. D. Miller, Drawbaugh, North, father and son, Woods, Young, Smith, Ramsay, Dale, Kilmore, Gorgas, Bruckhart, Dougherty, Bergner, and others.

Indeed, some of these introduced absolutely a new departure. Thus Henry F. Drawbaugh, the claimant's brother, swore that he never saw a telephone before the summer of 1872; in the so-called surrebuttal they introduced depositions, which, if competent and worthy of belief, show that he had seen and used them in 1868.

They also called Orlando Kahney and Augustus Kahney to swear that they knew about talking machines. We called John Kahney, father of Orlando and Augustus, resident of the village and next-door neighbor to Hosler, and who worked at Drawbaugh's shop upon the job which Augustus worked on when he says he saw talking machines, and called Hon. Simon Cameron Wilson, now mayor of Harrisburg, former superintendent of the Northern Central Railroad at Harrisburg, whose relations with Drawbaugh up to 1875–6 were such that he would have heard of a talking machine if there had been one to talk about. These two depositions were technically in rejoinder, even had there been no cumulative testimony introduced by the defence. With the exception of these two, the few witnesses we called in rejoinder about the talking machine were to specific details in the defendants' surrebuttal depositions.

The defendants had introduced witnesses who swore that they had heard our witnesses make statements inconsistent with their testimony. The occasions referred to were not brought to the attention of our witnesses on cross examination except in two instances (S. F. Hauck and W. C. Frownfeldter), and so the whole testimony was incompetent. It was our right to recall those witnesses if we wished

to. The law does not require us to do so, but it is quite desirable to do it generally in order to avoid the inference that the witness upon reflection is not able to deny or explain the statements alleged. We took our rejoinder testimony under circumstances of great stress, and we have reason to complain that the defendants outrageously wasted our time in the manner specified on p. 214 of complts, vol. iii, and as the expected day of hearing was close at hand we had no time for anything not absolutely necessary. The defendants relieved us from all embarrassment, however. The first witness we recalled to contradict alleged inconsistent statements was Cyrus Bowman, and the defendants immediately objected, four times over, that it was not competent to recall the witness "merely to reiterate statements made by him in his former deposition after those statements have been contradicted by other witnesses" (complts, iii, 2013). The objection was unfounded in law, but it relieved us from any adverse inference from not calling them.

A number of our witnesses in rejoinder lived near enough to Drawbaugh to have known of a telephone, if the existence of such an apparatus in Drawbaugh's shop had been matter of common talk before it was heard of elsewhere, though their relations with him were not intimate enough to make them specially valuable witnesses for us in that regard. The defendants, habitually disregarding the rules for the examination of witnesses, have not scrupled to address inquiries about telephones to witnesses whom we examined only upon other matters. (See Eppler and Garman.) That they have not pushed such inquiries further, and have not elicited anything useful for themselves when they have put them, taken in connection with the fact that they had interviewed most of our witnesses before they testified, and the fact that they have brought witnesses merely to say that they heard it mentioned, must satisfy the Court that the many neighbors called in rejoinder knew nothing of the matter. In a few cases, where the witness was called especially about telephones, we addressed the inquiry, but the defendants objected so strenuously that such proof was not admissible at that stage of the case, that we desisted rather than give them a pretence of excuse for beginning again.

The parts of our rejoinder which relate directly to telephones are as follows: —

We proved by the witness Holsinger, in our proofs in reply (complts, ii, 1210; p. 106, *supra*), that he published for Drawbaugh the advertising card already spoken of, with a list of what Drawbaugh in that card called his "patents," about eighteen in number. It was really a list of *inventions*, and not merely of inventions which had been patented. This was important. The list did not contain the telephone, and if it was to be taken merely as a list of things which had been *patented* it ought not to contain it, but if it was a list of the inventions which he thought worth mentioning, then the fact that no telephone was named in it was absolutely conclusive proof that no telephone had been invented by him at that time. The card is as follows: —

In our opening proofs we put in the file wrappers of Drawbaugh's patents, and the number of them agreed with the statements which he had made under oath as to the number of things that he had patented, — "about a dozen." Upon his cross-examination he testified that those patents mentioned in those file wrappers were patents he had taken out. His exact testimony is as follows (defts, ii, 1086): —

"*X Q.* 1551. Will you look at the pages of the printed record of the evidence on the motion for an injunction in this case, from 103 to 117 inclusive, which I now hand you, purporting to be certified copies of the file wrappers of various patents granted to Daniel Drawbaugh, and state whether the patents mentioned are those which were granted to you?

"*Ans.* Yes, sir; they are."

That was proof enough, in the absence of anything to the contrary, that these were his patents; if he was mistaken, and there were any more, it was for him to prove it. But, desiring to add the highest official certainty, we obtained from the Patent Office, and here presented and caused to be printed (complts, iii, 1916), a certificate from the Patent Office, giving the lists of patents granted to him as inventor or assignee, with the certificate that no other patents had been granted to him up to the institution of this suit, and the list thus given by the office exactly agrees with the list furnished by the file wrappers and Drawbaugh's testimony. That list is as follows: —

" *Complainants offer in evidence a certificate from the Patent Office as follows:* —

(2–175) $1.05

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE.
9014

To all persons to whom these Presents shall come, GREETING:

This is to Certify that a careful search of the records of this office has been made, and the annexed is a correct statement of all the Patents issued to Daniel Drawbaugh between Jan. 1, 1845, and Jan. 1, 1881, and during said period no other patents were issued to him or to any one as his assignee. In testimony whereof I, R. G. Dyrenforth, Actg. Commissioner of Patents, have caused the seal of

the Patent Office to be affixed this twenty-third day of April, in the year of our Lord One thousand eight hundred and eighty-four and of the Independence of the United States the One hundred and eighth.

(Seal of Patent Office) R. G. DYRENFORTH,
Actg. Commissioner.

No. 8,505, Nov. 11, 1851, For improvement in Stave Jointing Machines.

No. 12,900, May 22, 1855, For Stave Machine.

No. 38,296, April 28, 1863, For improvement in Mill Stone.

No. 38,472, May 12, 1863, For improved Machine for levelling the Faces of Mill Stone.

No. 51,435, Dec. 12, 1865, For improvement in Nail Plate Feeders.

No. 59,792, Nov. 20, 1866, For Improvements in Faucets.

No. 59,793, Nov. 20, 1866, For Improvements in Faucets.

No. 71,148, Nov. 19, 1867, For Improvement in Nail Plate Feeding Device.

No. 211,322, Jan. 14, 1879, For Improvements in Earth Batteries for Electric Clocks.

No. 225,577, March 16, 1880, For Improvement in Water Motors.

No. 229,592, July 6, 1880, For Improvement in Rotary Measuring Faucets."

[*Objected to as incompetent, because not the best evidence, it neither embracing the original patents nor certified copies of said patents, and also because the certificate of the Commissioner of Patents is not legal evidence of the results of search made by him; and also because the same is not competent as evidence in rebuttal or rejoinder.*]

[*Complainants' counsel refer to the Patent Office certificate produced by defendants in defendants' surrebuttal record, page 775.*]"

Comparing that list with the list given in his advertising card, it will be found that more than half the card is occupied with the statement of contrivances which were not then patented, and which, in fact, never have been, although a patent has been applied for on one of them. It was, therefore, a list of what country people very often call patents and "patent rights," that is, inventions which they thought could be patented.

H. W. S. Drawbaugh, complts, iii, 2077. — We have several times in the course of the testimony called attention to the fact that certain witnesses alleged that this lad, the son of Daniel Drawbaugh,

conducted experiments with the alleged talking machine in 1872, 1873 and 1874. We offered to prove and thereupon the defendants admitted that the boy was born Oct. 18, 1867, and was therefore only five or six years old at the time of the alleged experiments. The value and importance of this is more particularly referred to on pp. 24, 34, 36, 37, 539, *supra*.

No. 128. *Cyrus Bowman*, complts, iii, 2008.

No. 129. *Mrs. Bowman*, complts, iii, 2013.

Cyrus Bowman was the miller at Eberly's Mills from the spring of 1874 to the spring of 1876. He had been originally visited by the defendants as a person who must have known of the alleged talking machine if it ever existed, but he knew nothing of it. After that the complainants put him on the witness stand and he testified that he had never seen the thing and never heard of it while he lived in Milltown. The defendants in the rebuttal called Mrs. Marguerit Sweigert, sister of Mrs. Bowman, and J. Porter Harris, brother of Mrs. Bowman, who testified that they occasionally visited the Bowman family at Milltown and they heard the children speak of a talking machine there in 1875. The children in question died many years ago. We called Mr. and Mrs. Cyrus Bowman and proved by them that Henry Drawbaugh had been engaged running around the country to see witnesses who had testified for the complainants to endeavor to get them to change their testimony and come back and swear that they did remember having seen the talking machine. Mr. and Mrs. Cyrus Bowman also testified in the most positive terms that the talking machine never was spoken of in their house; that they never heard of it; that the electrical contrivance of Drawbaugh which they did hear of and which was much talked about was the clock, and that that was what Mrs. Bowman's brother and sister must have heard spoken of. That the clock was the electrical contrivance spoken of at the time is proved by the fact that Holsinger, Drawbaugh's intimate friend, published a notice about him in the county paper in November, 1875; that publication mentioned the clock as a matter of great interest, and mentioned no other invention. (See pp. 107, 460, *supra*.)

No. 132. *Wilson P. Walters*, complts, iii, 2029.

No. 133. *Mrs. Wilson P. Walters*, complts, iii, 2032.

The complainants called among other witnesses William Sadler and George W. Mumper, men who had good occasion to know what went on in Drawbaugh's shop, and who testified that they never heard of any talking machine there until a recent period. Thereupon the defendants in surrebuttal called William H. Martin (defts, iii, surbtl, 827; p. 669, *supra*), and he testified that he put up a barn on the place of Wilson P. Walters in 1870, and that he and the other hands while doing that frequently remarked that Drawbaugh had a talking machine and conversed about it.

The defendants produced Benjamin F. Zimmerman (defts, iii, surbtl, 822; p. 711, *supra*), who testified that upon an occasion, the date of which he could not exactly fix, but which he believed was about 1870 to 1872, he was at a sale on the Eberly farm, at Milltown, and there heard Wilson Walters and William Sadler — and, he thinks, also George W. Mumper, but he was not sure — saying that Drawbaugh had a talking machine there. Of course the recollection of a witness to an alleged casual conversation which he accidentally overheard twelve years before he testified is the weakest kind of testimony. The defendants had called Wilson P. Walters in their surrebuttal (p. 121) to prove a particular date when some men worked for him. It struck us as very extraordinary that they should undertake to prove a conversation between their witness Walters and our witness Sadler, not by asking Walters, although they had him on the witness stand, but by calling Zimmerman, who lived two hundred miles off, to come and state his recollection that he accidentally overheard it. So we went to Wilson Walters and his wife, and Walters said that he never had any such conversation with Sadler or with Mumper; that he was at that sale, but no such talk took place, and that he never heard that Drawbaugh had a talking machine until a short time before the controversy began, and long after the date of Mr. Bell's patent. He and his wife also testified that while the barn was being built on his place the mechanics boarded at his house, he never heard the talk about the talking machine.

The defendants had called Orlando Kahney and Milton Basehore, who testified that for several years from 1872 to the fall of 1875 they

worked for Wilson Walters as farm hands and lived at his house, and while there they both were sent together on one occasion to Drawbaugh's shop, and there saw, and one of them, Kahney, talked through a talking machine. The defendants called Walters to prove the date when Kahney and Basehore worked for him. It struck us as rather remarkable also that if these two men, who lived all that time at Walter's house, had seen a talking machine and had been much impressed by it, that they never should have mentioned it to Walters, and that the defendants should not have asked Walters for any confirmation; they have frequently sought for that kind of confirmation.

Upon inquiry we found that Walters had never heard of it from them, although they lived at his house for several years, including the time in question, and he and Mrs. Walters so testified. Then we found still further that before putting each of these witnesses on the stand the defendants had asked Walters whether he did not remember any of those alleged conversations, and tried to get him to testify to them, but he had told them in answer to their inquiries and before we saw him, that no such conversation took place. What does the Court think is the fact about a conversation alleged to have taken place between our witnesses Sadler and Mumper and the defendants' witness Walters, when all three of these men deny it, and the defendants have nothing to rest on but the fellow Zimmerman, who says he was playing ball at the sale and happened to pass near them for a moment and overheard the talk? And what does the Court think of a case that resorts to that kind of testimony and thus fills the record?

No. 134. *John Kahney*, complts, iii, 2033. — A full abstract of the deposition of this important witness is on p. 465, *supra*.

No. 135. *Simon Cameron Wilson*, complts, iii, 2057. — A full abstract of the deposition of this extremely important witness is on p. 428, *supra*.

No. 137. *Calvin Etter*, complts, iii, 2074. — Jesse Eicholtz, a witness called by the defendants in surrebuttal, testified (defts, iii, surbtl, ans. 7, p. 153; p. 630, *supra*) that he saw a talking

machine at Drawbaugh's shop and talked through it on the occasion of a visit which he and his wife made there at a date which he asserts to be before the 6th of November, 1873; and in the same answer and on his direct examination, also states that at that same visit he met John Teahl, then milling, so the witness said, at Teahl's mill near Drawbaugh's shop, and picked him up and carried him over to Harrisburg with him. John Teahl had at one time owned a mill at that place; in the spring of 1871 he sold it to Etter & Shanklin, moved away, ceased to have any connection with it; never came back afterwards. Either Eicholtz was making up his story as he went along, or he had some extraordinary confusion in his mind; at any rate, the answer relied on by the defendants to fix their date shows that he is a worthless witness. These facts Mr. Etter proved by his deed and his books.

No. 145. *George Leonard*, complts, iii, 2297. — He was the defendants' own witness. He was called to rebut the story which they had procured the Natcher family to tell, and he did it most effectually. (For this see pp. 238, 482, *supra*.)

No. 142. *George Ditlow*, complts, iii, 2122. — This witness is one of the David Ditlow family; from boyhood until 1875 he lived about half a mile to a mile from Drawbaugh's shop, and the relations of the families and the situation of the witness were such that if it had been common talk that there was a speaking telephone in Drawbaugh's shop he would have known of it; and if one had been known to be there it would have been commonly known. He heard nothing of it. Drawbaugh went to him early in the case before we went near him. (See for the knowledge and position of the whole Ditlow family pp. 583, *supra*.)

This witness and the following,

No. 141. *John M. Fisher*, complts, iii, 2100;

No. 150. *Elias F. Garman*, complts, iii, 2334, were called to contradict and control the deposition which Jacob Evans and his wife gave for the defendants in surrebuttal. Their testimony is fully stated on pp. 587–582, *supra*.

No. 164. *David Cowens*, complts, iii, 2458. — Had been a witness for the defendants about the ram and about the telephone. He now testified again about both. This testimony is stated on p. 663, *supra*.

No. 144. *Herman J. Eppler*, complts, iii, 2175. — Mr. Eppler was called by the complainants entirely about the ram. He was the agent of Draper from March, 1877, until March, 1880. He knows of his own personal knowledge that Draper and Kissinger went over to order the ram after he became agent; he knows of his own knowledge that the logs for the pipe were cut after he became agent, because he had something to do about them; he knows that the ram was put in the year after he became agent, and he has a letter, which he produced, from Draper to himself as agent mentioning the ram and enumerating it among the things which Kissinger ought to have done but had not. He had been visited by the defendants before we first saw him. In cross-examining him they made him their witness by addressing to him some inquiries about a telephone or talking machine, apparently and professedly based on what he had told them when they saw him before the complainants had their first interview. At the outset the complainants objected to the inquiry because it was outside of matters inquired of in the direct examination and insisted that the defendants thereby made Mr. Eppler their witness for that purpose, and that this objection applied with more special force because the witness had been interviewed by them before the complainants saw him, and was therefore in fact as much their witness as the complainants' witness. The information which their cross-examination drew from him was the following (complts, iii, 2187): —

At a certain time he and Joseph Sadler, now dead, in driving about Cumberland County went to the village of Eberly's Mills and into a certain shop. In that shop he saw some wagon wheels undergoing repairs, and (x-ans. 86) one man in there showed Mr. Sadler a box and something in the shape of a cup or bowl. The defendants elicited from Eppler that he had mentioned this to the complainants' counsel and then (p. 2188): —

"*X Q.* 87. Is that all you told Mr. Storrow on the subject?

"*A.* I said that he called it a speaking trumpet. I don't think he

called it a telephone. I think he called it a speaking trumpet. He was not talking to me, he was talking to Mr. Sadler.

"*X Q.* 88. Did you tell Mr. Storrow when it was that you and Mr. Sadler made this visit to Milltown?

"*A.* I think I mentioned 1874 first to him, but didn't tell him it was 1874. I told him I had to have something to go by to make the date—to make the year.

"*X Q.* 89. Didn't you tell him it was 1872 or 1873?

"*A.* No, sir; not to my recollection.

"*X Q.* 90. Did you and Mr. Storrow go anywhere else that day besides going to Milltown?

"*A.* Well, now, do I understand that correct? Is it after we left Milltown?

"*X Q.* 91. Either before or after you were at Milltown?

"*A.* Well, we drove through Milltown and on the other side, and turned around and came back, and came down past Eberly's Mill, and down into a wilderness there that I have never been before nor since; and he asked me whether that wasn't the place I was at. I answered, 'No, sir; that I never knew there was such a building there.'

"*X Q.* 92. Did you tell Mr. Storrow the name of the man at whose shop you had been with Sadler?

"*A.* I told Mr. Storrow that Mr. Sadler called him Drawbaugh; I didn't speak to him at all myself."

P. 2209. "*X Q.* 275. Tell us all that you remember of the first conversation that you had with him [the defendants' representative who visited the witness].

"*A.* Well, himself — Mr. Hill — and a man whom he called by the name of Drawbaugh spoke to me about a man by the name of Shireman coming to see me. He asked me whether I saw any box or instrument at Drawbaugh's shop. I told him I saw a box and a cup there, and a string fastened to a cigar box. I didn't examine it. The gentleman that was in the shop was explaining it to Mr. Sadler, not to me."

P. 2210. "*X A.* 277. . . . Mr. Shireman was the first party who came to see me.

"*X Q.* 278. Referring to the first conversation which you had with Mr. Hill at Baltimore, and to the fact that you then mentioned to Mr. Hill that you had seen a speaking apparatus at Milltown, or Eberly's Mills; you told Mr. Hill, did you, that the time when you saw that speaking apparatus was as early as 1872 or 1873, and not later than 1873?

"*A.* I did not say the word 'later'; I told him it was in 1874, as near as I could get at it, and that I had no date.

"*X Q.* 279. Do you mean to say that you told Mr. Hill at that time that it was in 1874?

"*A.* I told him that it was in 1874, as near as I could get at it, and told him that in case I could find a receipt perhaps I could fix the date.

"*X Q.* 280. Now, didn't you tell Mr. Hill that it was in 1872 or 1873, and as early as 1873?

"*A.* I cannot bring anything of the kind to recollection; I spoke to him of 1874, and also the same to Mr. Shireman when he was to see me.

"*X Q.* 281. Are you positive that you mentioned the year 1874 to either Mr. Hill or Mr. Shireman as the year in which you made that visit to Milltown?

"*A.* I am positive that I mentioned 1874, but I told him that I wasn't certain."

And there the defendants chose to leave the matter; that is, they left it that this witness had at some time seen, at a shop which belonged to some Drawbaugh in Milltown, something which was called a speaking trumpet, consisting of a box and a cup and a string fastened to a cigar box. And they further elicited from the witness that he had formerly said that he did not know when it was, but thought it was about 1874; and they tried to get him to say that he had told them that it was in 1872 or 1873. They made no further effort to fix the date; they did not call their man Shireman to whom he talked about it, though the fact that he did talk to Shireman about it is absolutely fixed by two postal cards written by Shireman to the witness, one dated Jan. 1, 1883, before the complainants saw him for the first time, and the other dated March 8, 1883, both of which were afterwards produced by the witness and are printed on p. 2283.

Then he was re-examined as follows (p. 2287): —

"*Q Q.* 763. In your cross-examination you were asked about a visit to Milltown with a certain Mr. Sadler to a certain shop, and you were asked what you saw there. I refer more especially to your cross-question and answers 84, 85, 86, 87, 275, and others relating to the same subject. Will you please state and describe, according to your best recollection, what it was that you saw at the shop at Milltown when you made the visit with Mr. Sadler?

"*A.* I went with Mr. Sadler to Milltown; he said he was going to Drawbaugh's shop; I went in with him; Mr. Sadler and Mr. Drawbaugh, as he called him, — I didn't know the gentleman, — were talking. Then he showed him a box and a bowl or cup; the box seemed to me as though it was a cigar box; there was a hole in the

box; a string run through and tied to a stick; the string run to the bowl or cup; there was no moulding or casing, or whatever you may call it, on the bowl; I do not know how the bowl was fixed inside; it was not shown to me; it was shown to Mr. Sadler, and I was looking on; there was part of a wagon there — wagon wheels — that was repaired.

"*Q Q.* 764. You say the string was fastened to a stick. State, if you remember, more particularly how the stick was used to fasten the string, — how it was arranged.

"*A.* A string ran through the bottom of the box, and the string was tied to the centre of a stick that was two or three inches long, or maybe not so long, say two inches, to the best of my recollection. And when he spoke to Mr. Sadler, I think he called it a speaking trumpet."

"*Q Q.* 765. You have said that you saw there a man whom he called Mr. Drawbaugh. Several persons of that name have lived in Milltown for a great many years. Do you know the first name of the Mr. Drawbaugh whom you saw that day?

"*A.* No, sir; he was only called Drawbaugh, or Mr. Drawbaugh.

"*Q Q.* 766. Mr. Daniel Drawbaugh has been present in the room during the greater part of your examination. Did this Mr. Daniel Drawbaugh come to see you at Baltimore last summer, with Mr. Hill, the first time Mr. Hill came to see you?

"*A.* Yes, sir.

"*Q Q.* 767. Is this Mr. Daniel Drawbaugh the man whom you saw, and who was called Drawbaugh, when you visited Milltown with Mr. Sadler?

"*A.* No, sir; he told me at Baltimore that it must have been John or his son — now I don't know which of the two he said — that I had seen at Milltown.

"*Q Q.* 768. When did that Mr. Sadler die?

"*A.* To the best of my recollection it was in 1880.

"*Q Q.* 769. After seeing at Milltown, on that visit with Mr. Sadler, the contrivance you have described, did you make anything, or undertake to make anything, in consequence of what you have seen that day?

"[*Objected to — first, as leading, and secondly, as immaterial and irrelevant, it appearing from the testimony of the witness himself that he did not see Mr. Daniel Drawbaugh at Milltown; that he did not examine the contrivance which he says he saw there, and it not appearing that Mr. Daniel Drawbaugh had anything in the world to do with that contrivance, or ever even knew of its existence.*]"

What do the defendants mean by this line of conduct? They, having previously interviewed this man, and without any pretence of surprise, introduced the matter in such a way as to leave upon the

Court the impression that in 1872 this witness saw a "speaking machine" at the shop of "Drawbaugh" (see int. 92, and 275) at Eberly's Mills, and when we bring out the truth of the matter, and it begins to hurt, they say that it is all immaterial, — they wish it were not in. Clearly it is very material and very hurtful to them, for the presence of a string telephone in the shop of Drawbaugh's brother in that little village in 1872, or 1873, or 1874, accounts for too much of the defendants' testimony to leave them a case.

The witness answered: —

"*A.* Yes, sir. Some time after I went home I took a cigar box, cut a hole in it, put a string through and fastened the string to a stick by the centre — had the box in a little summer-house in the yard; I ran the string over to the house, to a post — I took it off of the post, then, and ran it through the keyhole of the door. Then I had no one to listen to it, and I asked my wife to listen whether she could hear anything, and she wouldn't. She said she thought I was going crazy. Then I took it down and had nothing more to do with it.

"*Q Q.* 770. Before you made that contrivance, had you, or not, ever seen or heard of anything of that kind, except what you saw at Milltown when you were there with Mr. Sadler?

"[*Same objection.*]

"*A.* No, sir.

"*Q Q.* 771. You have been inquired of in the 84th cross and other questions, as to what you told Mr. Storrow about your visit with Mr. Sadler; did you, or not, when you first told him of that visit, tell him of the contrivance you made after you got home, as you have just described?

"[*Same objection.*]

"*A.* Yes, sir; I told him of the contrivance.

"*Q Q.* 772. In your 83d and 93d and intervening cross-questions, you were asked about Mr. Storrow taking you over to Milltown in a buggy, early last year, to point out where the shop was that you went to with Mr. Sadler. I wish you would state more fully what took place on that drive, after you got to Milltown, what road you took after you reached the grist mill, who pointed out what road should be taken, and what you did about pointing out where that shop was.

"[*Same objection.*]

"*A.* When we got over to the grist mill, Mr. Storrow asked me which road now, — or which way we turned when we got there. 'Up the hill to the right,' I said. He drove right along, and didn't stop, nor didn't speak, and when I got up the hill part ways I pointed out to Mr. Storrow the place I was at with Mr. Sadler. 'But,'

says I, 'there is no shop there now.' There was nothing more said. We drove on out past Milltown perhaps a quarter or a half a mile, came back to Milltown, and he drove me down past Eberly's mill, or a stone mill, and turned around when he got down to the end of it, at a clover mill, — I don't recollect how he called it, but I think it was the end of the street, though, or wilderness. He asked me, then, whether that was the place I was at. I told him 'No, sir'; that I had never been down there. I rather think that I told Mr. Storrow that I didn't know that there was such a place in existence.

" [*At the suggestion of respondents' counsel, complainants' counsel states that the place last referred to, which the witness says he had never been at, was Daniel Drawbaugh's machine shop, formerly the clover mill, and that the place which the witness pointed out as the place which he had visited with Sadler, was the place which is marked 'W. S.' on the plan of Milltown and which has not been in any way connected with Daniel Drawbaugh by the evidence.*]"

The defendants did not cross-examine him about this. Plainly it was what he told them at their interviews with him.

The defendants have, therefore, proved by this witness (made their witness for this purpose) that in the shop of Drawbaugh's brother, and right across the street from Drawbaugh's house (the plan so shows), this witness saw a string telephone, and so certainly saw it that he went home and constructed one like it, thus leaving not the slightest doubt whatever about the fact, and the defendants called no one to contradict it. They put the question to him after the defendants' agent Shireman and the defendants' counsel Mr. Hill and the claimant Drawbaugh had talked to him on the subject. It must be taken as a fact that the witness did see that contrivance there at some time. The date is not absolutely fixed. The witness says he is not sure when it was, but formerly stated that he thought it was in 1874; they tried to get him to say and to use it as a conclusive statement of the fact, that he told them that it was in 1872 or 1873. As this piece of evidence is put into the case by them deliberately, with the concurrence of the defendants' counsel and of the claimant, the Court cannot doubt the fact to be that at some time the incident referred to took place.

Moreover, since the defendants, after this preparation and under these circumstances, put into the case the assertion at least that the incident took place several years before the Bell patent came out, and as early as 1872 and 1873, and tried to get the witness to swear

to that, the Court must take it either that they know and believe that to be the true date, or else that they were trying to deceive the Court by endeavoring to get that man, who was in fact and in law their witness, to swear to a date which they knew was false. Unless the Court finds that these persons intended to perpetrate a deceitful course deliberately, it must find that in 1872, or 1873, or 1874, there was a string telephone made out of a box of the general size and shape of a cigar box at one end, and a teacup at the other, existing and ready for use in the shop of Drawbaugh's brother at Milltown. Now, with that fact as a foundation, the explicit testimony of many of their witnesses who do refer to string telephones unmistakably, and the testimony of a number of their witnesses who say that they talked through a box fastened to the wall, — to an oblong box or a square-shaped box, corresponding to no instrument whatever which the defendants have produced, but fairly enough met by such a box as Eppler describes, — can be plainly appreciated; and with that fact once in in the case there is quite enough to account for pretty much all the testimony the defendants have introduced.

If you take it that Drawbaugh was trying to make, as many other persons were, an electric speaking telephone without the slightest knowledge of how it should be made and without the slightest success, and, at the same time, or afterwards, got a string telephone through which persons talked, you have basis enough, considering the class of their witnesses, — not literally, of course, but substantially,— for the testimony which they introduced. You have a condition of things which will account for the fact that he never offered the electric speaking telephone for use to anybody. He would not have offered the string telephone, because it is a fact, put into the case by the defendants themselves, that string telephones were known generally in the community at least as early as 1869. (See the statement of defendants' counsel in the cross-examination of Sam'l F. Hauck, complts, ii, p. 1175.) There were plenty of reasons why a thing known as a string telephone of such limited range as to be a mere toy (until some very recent improvements in it) should not have attracted the attention of our witnesses who knew generally what went on at the shop.

Among the defendants' witnesses who plainly refer to string telephones as the instruments they saw are

Jesse Eicholtz (defts, iii, surbtl, 152, 162; app. 629, 631), is a witness for the defence who is bad for them about string telephones. They called him in the fourth year of the case, and he testified that he heard well through a talking machine at Drawbaugh's shop in 1873. On cross-examination it appeared that the machinery was quiet at first and afterward Drawbaugh started it on purpose, and he states that he heard perfectly well. A string telephone would do this; any couple made out of B, F, C, I could not. He had told this to defendants' counsel, but they had not put it in evidence. Then his wife was called to support him, and on her cross-examination it appeared that he had been there in 1871 also. So he was recalled, and said that he had, and *had so informed the defendants' counsel;* they had not referred to that visit, and finally he testified to it (defts, iii, surbtl, 162): —

"As to that first visit, I would say that that first talking machine was entirely different from the second. The first consisted of a tin can and a glass tumbler. They were connected by a string; if I mistake not, *it was a string instead of a wire.* The second was connected by wire. That is my recollection; but it has been so long since that I wouldn't positively swear that it was a string or a wire, but I think it was a string."

There is no mistaking that. It means string telephone. Naturally they did not want that visit put in. But he is their witness.

David M. Ditlow (defts, i, 508; app. 187), says that he saw and heard through a machine "about 1872." He has examined all the exhibits, and cannot recognize any of them. But he knows what he saw and says of it: —

"*A.* 6. I came to the shop there, and he showed me a machine with tin tubes at *each* end, and a wire wrapped with string."

BRIEF AND ANALYSIS OF THE PROOFS RELATING TO THE "FLOOD AND BRIDGE" ISSUE, AND THE "HYDRAULIC RAM" ISSUE.

During the taking of the proofs two collateral issues have been developed, neither of any great materiality intrinsically, so far as complainants are concerned, but which have derived some real, and greater factitious, importance from the course which defendants elected to pursue with reference to them.

The testimony of more than two hundred of the witnesses who have been examined in the case refers, either solely or mainly, to one or other of these side issues, much the greater number of these witnesses having been called by defendants, for, with reference to these side issues, as with reference to the main issue, defendants appear to have proceeded upon the theory that mere mass or quantity will condone a lack of convincing quality in evidence. Upon both issues, the testimony of those witnesses whose duty it was to know, or who had sufficient special reasons to know the true facts, is with complainants, while defendants have been able to produce in support, or rather in seeming support, of the case which they wished to establish about these side issues, a great mass of just the same kind of testimony produced to establish the talking-machine story.

For complainants, the real importance of these issues — and in this regard they are of real value — is that they illustrate, in the most lively way, the utter worthlessness of that kind of testimony.

The facts involved in both these issues are of such a kind as rendered it possible for complainants to *directly* and completely rebut the testimony adduced for defendants on the subject, and show its falsity.

During a period of about five months which intervened between the closing of complainants' rebutting proofs and the taking of defendants' surrebutting proofs, defendants' agents seem to have scoured the country for evidence which would answer their purposes

upon these two issues. The record shows that they approached the parties whose duty it was, or who were in a position to know the true facts of the matters, and who, or most of whom, have since testified for complainants, and that, finding the knowledge of these parties not of a kind to suit their purposes, they then went in search of, and, without much difficulty, procured, more amenable material.

Of these collateral issues one may be termed the flood-and-bridge issue; the other the hydraulic-ram issue.

THE FLOOD-AND-BRIDGE ISSUE.

This arose out of the testimony of one E. B. Hoffman, called by defendants to testify to alleged knowledge, at comparatively early dates, of Drawbaugh's alleged talking machine (pp. 502–689, defendants' case).

The alleged knowledge to which Hoffman was more particularly called to testify, he pretends to have acquired during a visit which he says he made to Drawbaugh's shop while he was fishing on the Yellowbreeches Creek, in the latter part of the summer of 1873. The question which led up to his examination and testimony upon this point was as follows: —

"*Q.* 9 (p. 502). Do you recollect a freshet that occurred in that locality some years after the time you have referred to" (he had just previously been testifying to events alleged to have occurred in 1868) "which washed away several bridges on the Yellowbreeches Creek?

"*A.* I do; there was a freshet in 1873, in the latter part of the summer. I can't remember the exact time; I was on the creek at the time. *It washed away the foot bridge at the mill known as Ditler's mill at that time, and also the red bridge up at Heck's.*"

What the examiner wrote as "Ditler's Mill" was intended as Ditlow's, being a mill standing on the farm where the Ditlow family lived, but better known as "Etter & Shanklin's Mill."

The proofs show that floods or freshets in the Yellowbreeches Creek are of frequent occurrence, one or more such floods or freshets having occurred almost every year. It was regarded, therefore, as necessary, in order to sufficiently identify the particular flood to which witness referred, and with which he associated a particular

visit to Drawbaugh's shop, to have him distinguish the flood by reference to some special event or events attending it, — to identify it, as it were, by certain "ear marks"; and this Hoffman undertakes to do in his testimony by stating that the particular flood to which he has reference was one which occurred in the latter part of the summer of 1873, *and was attended with certain specific results in the way of damage.*

Hoffman's deposition is exceedingly vague and weak, and called for no special answer.

It appears from his own testimony that the summer of 1873 was by no means the only occasion of his taking a fishing trip to the Yellowbreeches Creek, but that on the contrary (p. 689) he was up there fishing on Sundays at different times after that, and up to and including the year 1877.

It further appears that he was at Drawbaugh's shop a good many times during different years up to and including 1877. The value of his testimony therefore depends entirely upon his ability to report correctly what took place, and to assign it to the right year. It is a mere question of arbitrary memory. His statements in regard to the flood in the latter part of the summer of 1873 furnished an opportunity of testing his powers of accurate memory and accurate statement; and complainants had no difficulty in showing that he is utterly deficient in these qualities. They proved in their rebuttal that the Ditlow or Etter & Shanklin Bridge was *not* washed away in the summer of 1873; that there is not, and has not been, on the Yellowbreeches Creek any such bridge as a *red* bridge at "Heck's"; that the bridge known as "Hake's *red* bridge and the only bridge ever known by that name in the county, was not on the Yellowbreeches Creek, but on another creek five miles away; that it was built in September, 1868, and carried away by ice Feb. 7, 1881, and was not carried away in the summer of 1873; that there is no "Hake" bridge on the Yellowbreeches Creek at all; that the first bridge above Drawbaugh's shop on the Yellowbreeches is a bridge at Heck's mill, but that this bridge is *not red* and never has been red, but is whitewashed; and that *this* bridge was built before 1860, *and has never been carried away nor rebuilt.*

These things were shown by the deposition of Emminger, one of

upon these two issues. The record shows that they approached the parties whose duty it was, or who were in a position to know the true facts of the matters, and who, or most of whom, have since testified for complainants, and that, finding the knowledge of these parties not of a kind to suit their purposes, they then went in search of, and, without much difficulty, procured, more amenable material.

Of these collateral issues one may be termed the flood-and-bridge issue; the other the hydraulic-ram issue.

THE FLOOD-AND-BRIDGE ISSUE.

This arose out of the testimony of one E. B. Hoffman, called by defendants to testify to alleged knowledge, at comparatively early dates, of Drawbaugh's alleged talking machine (pp. 502–689, defendants' case).

The alleged knowledge to which Hoffman was more particularly called to testify, he pretends to have acquired during a visit which he says he made to Drawbaugh's shop while he was fishing on the Yellowbreeches Creek, in the latter part of the summer of 1873. The question which led up to his examination and testimony upon this point was as follows: —

"*Q.* 9 (p. 502). Do you recollect a freshet that occurred in that locality some years after the time you have referred to" (he had just previously been testifying to events alleged to have occurred in 1868) "which washed away several bridges on the Yellowbreeches Creek?

"*A.* I do; there was a freshet in 1873, in the latter part of the summer. I can't remember the exact time; I was on the creek at the time. *It washed away the foot bridge at the mill known as Ditler's mill at that time, and also the red bridge up at Heck's.*"

What the examiner wrote as "Ditler's Mill" was intended as Ditlow's, being a mill standing on the farm where the Ditlow family lived, but better known as "Etter & Shanklin's Mill."

The proofs show that floods or freshets in the Yellowbreeches Creek are of frequent occurrence, one or more such floods or freshets having occurred almost every year. It was regarded, therefore, as necessary, in order to sufficiently identify the particular flood to which witness referred, and with which he associated a particular

visit to Drawbaugh's shop, to have him distinguish the flood by reference to some special event or events attending it, — to identify it, as it were, by certain "ear marks"; and this Hoffman undertakes to do in his testimony by stating that the particular flood to which he has reference was one which occurred in the latter part of the summer of 1873, *and was attended with certain specific results in the way of damage.*

Hoffman's deposition is exceedingly vague and weak, and called for no special answer.

It appears from his own testimony that the summer of 1873 was by no means the only occasion of his taking a fishing trip to the Yellowbreeches Creek, but that on the contrary (p. 689) he was up there fishing on Sundays at different times after that, and up to and including the year 1877.

It further appears that he was at Drawbaugh's shop a good many times during different years up to and including 1877. The value of his testimony therefore depends entirely upon his ability to report correctly what took place, and to assign it to the right year. It is a mere question of arbitrary memory. His statements in regard to the flood in the latter part of the summer of 1873 furnished an opportunity of testing his powers of accurate memory and accurate statement; and complainants had no difficulty in showing that he is utterly deficient in these qualities. They proved in their rebuttal that the Ditlow or Etter & Shanklin Bridge was *not* washed away in the summer of 1873; that there is not, and has not been, on the Yellowbreeches Creek any such bridge as a *red* bridge at "Heck's"; that the bridge known as "Hake's *red* bridge and the only bridge ever known by that name in the county, was not on the Yellowbreeches Creek, but on another creek five miles away; that it was built in September, 1868, and carried away by ice Feb. 7, 1881, and was not carried away in the summer of 1873; that there is no "Hake" bridge on the Yellowbreeches Creek at all; that the first bridge above Drawbaugh's shop on the Yellowbreeches is a bridge at Heck's mill, but that this bridge is *not red* and never has been red, but is whitewashed; and that *this* bridge was built before 1860, *and has never been carried away nor rebuilt.*

These things were shown by the deposition of Emminger, one of

the county commissioners, and by the county commissioners' records. (See p. 932, complainants' proofs.)

Defendants could not meet the testimony showing the falsity of Hoffman's statement so far as concerned "the red bridge up at Heck's," so that we begin with the extraordinary fact that the witness confounded a bridge on the Yellowbreeches, which has never been carried away, with another bridge on another stream five miles off, and carried away only a year before he testified, and that he has assigned this disaster of 1881 to 1873, and connected it with what he pretends to have seen at Drawbaugh's shop.

In their surrebuttal, defendants have proved what was never denied, and what is in itself immaterial, that there was a freshet on the Yellowbreeches Creek in August, 1873, and that that freshet was larger than some of the many which have occurred on the creek at different times, and, perhaps, the largest for a number of years.

The testimony of a considerable number of the witnesses called by defendants on the subject is confined to this immaterial point, and to proving that the flood or freshet of August, 1873, was known in the vicinity as the "watermelon flood," because it carried off a large number of watermelons from a particular patch. But what was more material, defendants attempted to show the accuracy of Hoffman's statement that the Ditlow or Etter & Shanklin Bridge was washed away by this flood of August, 1873.

They went further than this, and virtually created a new and additional issue, by undertaking to show that not only was the Ditlow or Etter & Shanklin bridge entirely swept away, but also a bridge known as Zinn's Clover Mill Bridge, a few miles above, a bridge above that again, known as Zinn's Fulling Mill Bridge, and two other bridges still farther up the stream, and known respectively as Liberty Forge Bridge and the Andersontown Fording Bridge.

Of course it will be seen that were the facts conclusively proved that there was a great flood in the Yellowbreeches Creek in August, 1873, and that that flood did carry off the Ditlow or Etter & Shanklin Bridge, it would not prove that the witness Hoffman had given a correct account of what he saw at Drawbaugh's shop at that one of his many visits there.

On the other hand, to show that Hoffman was in error as to any one of his deliberate statements on the subject was necessarily to throw great doubt upon his entire testimony, by showing that he is unable to remember or report correctly past events, even when they are of a kind to particularly impress him, as, to judge by his testimony, was the case with this matter of the flood, and its consequences.

The only direct materiality of the flood-and-bridge issue is to show Hoffman's capacity for statement or misstatement, his power, or want of power, to correctly remember and correctly describe past occurrences.

Consequently the only material and relevant part of defendants' surrebutting testimony upon the subject is that which relates to the alleged destruction of the Ditlow or Etter & Shanklin Bridge.

Hoffman's statement was broadly that the Ditlow Bridge, that is, the whole bridge, was washed away. Defendants so understood his testimony, and started in their surrebuttal to prove that the bridge *was* entirely swept away. For that purpose, they first called a witness by the name of JAMES SHAFFER (p. 284, defendants' surrebuttal). Shaffer begins his story by saying in substance that in the summer and fall of 1873, and at the time of the freshet of that year, he was working for one John P. Sweeney, close to Heck's mills. This initial statement complainants have shown to be untrue, and the fact to be that, while Shaffer worked for Sweeney for a short time in the summer of 1872, and that of 1874, and in October of 1875, he was not so working during the summer of 1873. (See deposition of JOHN P. SWEENEY, p. 1996, complainants' rejoinder.)

Shaffer says that while so working at Sweeney's,—who lives on the York County side of the creek,—he was in the habit of visiting one Joseph Orris, who lived on the Cumberland County side, and for that purpose was accustomed to cross the creek over the Etter & Shanklin Bridge.

Complainants have shown by the testimony of REBECCA ORRIS (p. 2027 rejoinder), and that of MARTIN BEST (p. 2073 rejoinder) (when read in connection with the map at the end of complainants'

Exhibits, Vol. 3) that in the summer of 1873 Joseph Orris was living in a place to which no one would think of going from Sweeney's by way of the Etter & Shanklin Bridge, and that it was not until 1874 that Mr. Orris lived in a house which would be most conveniently approached from Sweeney's, by way of that bridge.

Shaffer goes on to testify that the Etter & Shanklin Bridge was carried away by the flood of August, 1873, and claims to have derived his knowledge of the fact through one of his periodical visits to Mr. Joseph Orris. He states in substance that he undertook to cross the Etter & Shanklin Bridge for that purpose, and that, "*to the best of his knowledge, the whole bridge was swept away;* there *might* have been some trestle work standing." He further testifies that, because of the destruction of the bridge, he was compelled to go to Mr. Orris's by another route.

As it is clearly shown that Shaffer did *not* live and work for John P. Sweeney in the summer of 1873, and did *not* during that year and from that place visit Joseph Orris by the way of the Etter & Shanklin Bridge, his testimony calls for no further consideration. It may be noted here, however, that defendants have themselves openly given up this witness, Shaffer, their counsel admitting (see p. complainants' rejoinder) that Shaffer was *mistaken*, and had *confounded* different floods.

The next of defendants' surrebutting witnesses to the alleged carrying away of the Etter & Shanklin Bridge was one A. B. DANNER (p. 402, surrbtl), who says, that, living in 1873 at Milltown, he, in company with George Drawbaugh, on a certain Sunday in August, went to Ditlow's to look at some pups, and that he, Danner, then saw part of the Etter & Shanklin Bridge *hanging to the Cumberland County side of the creek; the balance of the bridge had been swept away by the high water.* He thinks he was within a hundred feet of the bridge, standing on the hill with the rest of the party, between the public road and the creek below the mill. If this were so, the rest of the party must have seen what Danner says he saw, and one of the alleged party was Geo. Drawbaugh, nephew of the claimant, Daniel Drawbaugh; but neither Geo. Drawbaugh nor any other of the party has appeared to confirm Danner's statement.

It may be noted here also that only one member of the Ditlow families referred to by Danner, and who resided, down to 1875, close by the Etter & Shanklin Bridge, was examined by defendants as to the alleged damage to that bridge by the flood of August, 1873, and that the one so called, ANNIE MCCLEAF (p. 445, surrbtl), tells a very different story from that of Shaffer or that of Danner as to the extent of damage done to the bridge.

Defendants having obtained from these two alleged "casual" witnesses, Shaffer and Danner, untrue testimony as to the carrying away of the bridge, next proceeded to demonstrate the untruth of that testimony.

DAVID SPANGLER (p. 425, surrbtl) testifies in substance that, from the beginning of 1873 to the beginning of 1875, he lived on the Studebaker farm, close to the Etter foot bridge; that while he lived there, the bridge was carried away once, and once the York County end was carried away; that it was in *February*, 1875, that the *whole* bridge was carried away, and in the summer, after harvest, of a year not named, that the York County end was carried away. By the York County end of the bridge he states that he means *simply the end on the land, the inclined planking that ran up on to the bridge. The main body of the bridge was not washed away, but only this inclined planking* (x 18, 19).

HENRY MILLER (p. 441, surrbtl) gives testimony to substantially the same effect, and fixes the time of the accident of the carrying away of the platform to the York County end as August, 1873.

To the same effect, also, testify MRS. ANNIE MCCLEAF (p. 445), AMOS ZIMMERMAN (p. 449) and ELIZABETH SPANGLER (p. 452), the daughter-in-law of David Spangler, and who adds to her father-in-law's testimony that he put up a temporary platform to replace that which had been washed away, *so that passengers could use the bridge.*

To this DAVID SPANGLER, JR. (p. 454) adds that this temporary plank was put up within a day or two after the original incline was washed away by the flood.

By this testimony defendants themselves demonstrated completely the falsity of that of Shaffer and Danner, by showing that the bridge was not only not washed away, but that such damage as was done

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was temporarily repaired immediately after the accident; so that, if Shaffer or anybody else had had occasion to cross the bridge, there would have been no difficulty whatever in doing so.

David Spangler, Jr., to be sure, adds to the testimony of his father and wife, that the Cumberland County end of the bridge was also swung around, but was not carried away, being chained on the Cumberland bank of the creek.

But the only other of defendants' witnesses who agrees with the younger Spangler in this statement is SOLOMON ZIMMERMAN (p. 421, surrbtl), and the incorrectness of their statements on that point is shown by the testimony, for complainants, of JACOB S. ESHLEMAN (p. 1942, rejoinder). Mr. Eshleman was supervisor, in the year 1873, of that part of Lower Allen Township in which the Etter & Shanklin Bridge is situated, and that bridge came under his immediate supervision. Consequently it was his official business to know what, if any, damage was done to the bridge in 1873, and what, if any, repairs made to it. Mr. Eshleman produces his official accounts, and testifies therefrom and from personal recollection, that during the year 1873 the bridge was *not* washed away (int. 6) and was *not* even out of repair on the Cumberland County side, except that there was one rotten log, which he replaced by a new one (int. 9), and he produces the bill for that new log, and points out in his book of accounts the entries of the charges for putting it in (p. 1945). Other than this, Mr. Eshleman did no work on the bridge in that year, except a little repairing of the banister (int. 15), a matter so small that no account of it was taken (x 71, 72).

This is conclusive proof that the flood of 1873 did no damage whatever to the Cumberland County side of the bridge, and the testimony, on this subject, of defendants' own witnesses, David Spangler, Sr., Amos Zimmerman, Mrs. Annie McCleaf and Henry S. Magonnell (p. 963, surrbtl), is in harmony withth at of Mr. Eshleman on this subject.

Mr. Eshleman also testifies that during the winter of 1883–4, and therefore while defendants were taking their surrebutting testimony, *he was summoned by them to go to Harrisburg, and testify in this case; that he went there, and saw defendants' counsel, and let them*

see the book and the bill referred to in his testimony for complainants. Defendants did not call Mr. Eshleman.

WILLIAM J. MCLAUGHLIN (p. 751) and his son, JACOB J. MCLAUGHLIN (p. 763, surrbtl). These individuals appear on the scene as having accompanied Hoffman upon his alleged fishing excursion on the Yellowbreeches Creek in August, 1873, and contemporaneous visit to Drawbaugh's shop. That Hoffman, in testifying, should not have referred to their presence, and that they were not called to confirm Hoffman during the taking of defendants' original proofs, although they both are, and were then, residents in Harrisburg, where those proofs were taken, is quite enough, in itself, to condemn any testimony coming from them at a much later stage of the case.

It is a conclusive presumption that Hoffman, at the time he testified, did not know or did not recollect that McLaughlin had been in his company upon this fishing excursion, and did not mention any such thing to the defendants or their counsel, or the fact would certainly have been developed in his testimony, and McLaughlin called.

This is sufficiently obvious when it is noted that McLaughlins' story about the talking machine is very much larger than Hoffman's own. But being called to the stand, after defendants' own proof had sufficiently demonstrated the falsity of the story that the Etter & Shanklin Bridge was washed away, the McLaughlins were not allowed to swear to *that* proposition, but told a story on that subject smaller than Hoffman's, stating that they had been eyewitnesses to the carrying off of HALF of the bridge on the York County side of the creek, — a statement, however, itself not true.

Finally, defendants called one HENRY S. MAGONNELL (p. 963, surrebtl), who states that he helped to repair the bridge after the flood of August, 1873, in September or October, to the best of his knowledge, and whose testimony, as to the extent of the damage done to the bridge, is similar to that of David Spangler, Mrs. David Spangler, Jr., and Amos Zimmerman. Magonnell says that the repair done to the bridge was to re-erect the sloping part on the York County side, leading from the ground up to the first pier, and that when they went there that day to begin work on it there was already a temporary plank placed there, so that a person could walk up on to the bridge, and the bridge was standing (ints. 14, 15; x 45–48).

Thus defendants, having deliberately set out to establish the broad proposition that the Etter & Shanklin Bridge was washed away by the flood of August, 1873, and having procured the testimony of two false witnesses to that effect, and having done this with a knowledge of, or with the means of knowing, the truth of the matter, as it would be testified to by those who, from official position or residence, were in the best position to know, ended by showing that the broad proposition made by Hoffman, and which they undertook to establish, was absolutely false; that the bridge was *not* washed away; that the extent of the damage done was simply the carrying off of an inclined walk leading up to the bridge, from the York County bank of the creek, and that this damage was temporarily repaired at once, so that there was no considerable period of time during which the bridge was impassable.

Defendants may say that a strict construction is not to be given to Hoffman's statement that the flood washed away the bridge, and that the *substantial* correctness of his testimony is sufficiently shown by the apparent facts that there was a heavy flood in the creek in August, 1873, and that it did *some* damage to the bridge. But the real issue is as to Hoffman's *accuracy* of recollection and of statement; defendants so understood it, and undertook to prove the accuracy of Hoffman's statement regarding the Ditlow Bridge, as he made it.

The entire value of Hoffman's testimony, if it has any, as to the main point at issue, the alleged talking machine, is dependent upon his accuracy, his ability, as well as his disposition to tell the exact truth, to note, remember and report correctly, after a considerable lapse of time, things and events which he may have seen; and when he is found to have observed or remembered or reported inaccurately, and with gross exaggeration, a circumstance which, from his deposition, would appear to have particularly impressed his mind at the time, and to be coupled in his thoughts with the main subject of his testimony, the result must be to throw great suspicion upon his ability, to say nothing of his disposition, to tell the exact truth.

Defendants, therefore, appreciated the necessity of proving, if they could, the accuracy of Hoffman's statement of the collateral facts by which he undertook to fix the time of his alleged visit to Drawbaugh's shop. Part of that statement — the alleged carrying

away of a red bridge at Heck's—it was impossible for them to even try to substantiate, because there was no such bridge on the Yellowbreeches Creek, to be washed away in 1873, or at any other time, and because a red bridge at "Hake's," which did exist on another creek five miles away, was not carried off or damaged in 1873.

Not dismayed by this, however, they did try to substantiate the rest of the story, making a special issue of the matter, and devoted great trouble and expense to it, and with the result of showing that that part of the story, also, as Hoffman gives it, is false; that as a matter of fact the Etter & Shanklin Bridge was not washed away, the bridge proper not so much as damaged.

Defendants had some of their witnesses testify that, after the flood, they HEARD that the Etter & Shanklin Bridge was washed away! Others, again, that it was *common report* that the bridge had been washed away. Just what comfort defendants derive from this we do not know, for whether Hoffman's story is to be regarded as a mere reflection of common report about something of which *he* had not, in fact, any personal knowledge, or as a careless and exaggerated statement about something of which he *had* personal knowledge, it is about equally fatal to his testimony. If, on the stand, he could state as fact what he did not personally know to be fact, or could not or would not state with accuracy events of which he did know, and which were of a kind to the accurate observation of which his intelligence was adequate, what value can his testimony have upon such a subject as that involved in the main issue in this case?

Defendants in their surrebuttal thought it worth their while to wander beyond and outside of the issue presented by Hoffman's testimony and the evidence for complainants in reply, and to prove that a number of other bridges on the Yellowbreeches Creek besides the Etter & Shanklin Bridge were carried away by this flood of August, 1873.

To this end they examined a number of witnesses, and among them the James Shaffer who was so accommodating a witness as to the Etter & Shanklin Bridge. Mr. Shaffer was quite competent to the task of carrying off, in addition, the bridges known as Zinn's Clover Mill Bridge and the Liberty Forge Bridge. *Before* the calling

of Shaffer, defendants had called C. I. BOYER, who was, in 1873, and is still, the proprietor, or one of the proprietors, of the Liberty Forge. Mr. Boyer simply testified (p. 206, surrebuttal) to the fact that there was a heavy freshet in the creek in August, 1873. *He was not asked whether that freshet carried away the "Liberty Forge" Bridge*, although, as appears from his testimony, he was on the spot during the flood.

Further than this, Mr. BOYER was subsequently called by complainants (p. 1941, rejoinder) and testified that he thinks the flood of August, 1873, did *not* carry away the Liberty Forge Bridge. JACOB E. MUMMA (p. 2001, complainants' rejoinder) was a partner with Mr. Boyer in the Liberty Forge, and lived at that forge for seven years from April, 1872 (int. 12), and he testifies positively that the foot bridge over the Yellowbreeches at the forge was never washed or carried away while he was there (int. 7), nor ever moved until it was carried away by a wagon bridge, which was in course of erection in the year 1877 (ints. 7–9).

In view of the testimony of Messrs. Boyer and Mumma, it is not necessary to say anything further about that of Shaffer, so far as concerns the Liberty Forge Bridge.

As to the carrying off of Zinn's Clover Mill Bridge, Shaffer's story is in substance that he knows it was carried off by the flood of August, 1873, *because* he helped to repair it *in the following spring* (1874) while working for Adam Henry Zinn, who was then and is now living close by that bridge (int. 18, x 22, 44, 45).

In cross-examination Shaffer names some of the parties who worked with him in rebuilding the bridge in the spring of 1874, as he thinks. David Smith, he says, was the boss and John Greenfield one of the laborers (x 89).

Complainants called ADAM HENRY ZINN (p. 1955, rejoinder), DAVID SMITH (p. 1894 rejoinder) and JOHN GREENFIELD (p. 2014, rejoinder), and in addition to these, DANIEL WEAVER (p. 1917 rejoinder) who was supervisor of the upper end of Lower Allen Township in 1875, WILLIAM UMRERGER (p. 1973) and JOHN MCALLISTER (p. 2082), and showed conclusively by them that Shaffer was *not* working for Adam Henry Zinn in the spring of 1874, but did work for him in the summer of 1875; that it was in the summer of 1875 and

not the spring of 1874 that Shaffer assisted Smith, Greenfield, Umberger and McAllister to rebuild the Clover Mill Bridge, and that the necessity for the rebuilding of it at that time was *not* that it had been washed away by a freshet in the summer of 1873, but was carried off by an ice flood in the early spring of 1875.

Other witnesses for the defendants to the alleged destruction of the Clover Mill Bridge by the flood of August, 1873, are

S. M. DECKMAN (p. 247, surbtl), who resides on a farm a short distance below the bridge, and who testifies, in substance, that he visited the bridge immediately after the freshet of August, 1873, having been told by his nearest neighbor, Andrew Schell, now dead, that *half* of the bridge had been carried away. We shall have occasion to refer more particularly to this Mr. Deckman further on.

Mrs. ELLEN SHAFFER (p. 294, surbtl), a daughter of the Andrew Schell referred to by Deckman, and who testifies that in 1873 she was living on the York County side of the creek and in visiting her parents, who lived on the Cumberland side, was in the hab it of crossing the Clover Mill foot bridge, and thata week after the flood in the summer of 1873, she started to go across that bridge, found that it was gone, and her father took her across the creek in a boat. Deckman testifies, in substance, that only half of the bridge was carried away. Mrs. Ellen Shaffer is more efficient, and tells us that she *noticed* that the bridge was *altogether* gone.

In addition to the Clover Mill Bridge and the Liberty Forge Bridge, defendants undertook the task of carrying off Zinn's Fulling Mill Bridge, which is a mile or two above the Clover Mill Bridge. Their principal witness to accomplish that task was this same Mrs. Ellen Shaffer. Mrs. Shaffer very clearly recollects that she had occasion, after the flood of August, 1873, to cross the creek to go to the fulling mill for stocking yarn, *as she was in the habit of doing*, and that she did not cross the bridge because it had been carried off, but drove across the creek; that she bought some stocking yarn on that occasion from Jacob Kimmell, made but one purchase from him that year, and it was in the fall, and that she paid Kimmell for that yarn (int. 33, 34, x 53–65).

In reply to this complainants called the Jacob Kimmel referred to, and who was originally one of defendants' witnesses, (see p. 178, surbtl, defendants' proof).

KIMMEL testifies (p. 1988, rejoinder) that he did at one time work at Zinn's Fulling Mill, but that this was before his marriage, in 1868, and that after his marriage he never worked at that mill, save to do some carpentering work. He further says that in the spring of 1873 he went into the employ of the Goodhope Woolen Mill, which is about eight or nine miles from Zinn's, and continued to work there one year, and then moved to Mechanicsburg, and has lived there ever since. He was not at Zinn's Fulling Mill at all during the fall and summer of 1873. He knows Mrs. Ellen Shaffer; did not sell her any yarn, or anything else, at Zinn's Fulling Mill in the fall or summer of 1873, nor see her at all during that summer and fall at that fulling mill.

In addition to this, HARVEY F. HARRO (p. 1990, rejoinder) testifies for complainants that he lived and worked at Zinn's Fulling Mill from the spring of 1870 to the spring of 1875; that he knows Jacob Kimmel; and that the said Kimmel worked some at carpentering work at the mill, in the *first two* years of witness's employment there, but not at any time during witness's five years' continuance at the mill, as a hand there in the wool business.

Mr. Harro further testifies that the Fulling Mill Bridge was carried away once, while he was working there, in the year that Ezekiel Worley was supervisor, — he thinks in 1871 (int. 12), — and was rebuilt a month or two afterwards.

He further testifies, on cross-examination, that he remembers the high water in the summer of 1873 (x 28), and that it was about as high as any occurring there while he lived on the spot (x 29); that this high water, however, *did no damage at or about the fulling mill, with the exception of wetting the floors* (x 31); *and that he does not remember any damage being done by that flood at or about the Fulling Mill Bridge* (x 41).

This very completely disposes of Mrs. Shaffer.

It is worth noting, however, that it is attempted to give particular point to her testimony as to the alleged destruction of the Clover Mill Bridge, by having her testify that she was living with her

uncle, John Fettrow, in 1873, on the York County side of the creek, and that, while living there, was in the habit of occasionally visiting her parents, who lived on the Cumberland County side of the creek.

It appears, however, from her testimony (q. 6 and 7), that, in the year 1871, she was living at one Henry Atticks's, and in 1872 in the house of one John Hamilton; and complainants show, by the testimony of Adam Henry Zinn (q. 63 and 64, p. 1962, rejoinder), that those places are also both on the York County side of the creek, and (q. 61) that Mrs. Shaffer's father was living on the Cumberland County side of the creek from 1870 up to the time of his death, in 1877. No doubt, during the years 1871 and 1872, as well as the year 1873, she paid filial visits to her parents; and complainants show, by the testimony of David Smith (q. 7, p. 1895) and Harro (int. 12, p. 1991, rejoinder) that in 1871 both the Fulling Mill and the Clover Mill Bridges were down, and were repaired that year by Mr. Smith.

Other witnesses for the defendants as to the alleged destruction of the Fulling Mill Bridge are GEORGE S. SIPE (p. 266, surrbtl) and JOHN F. WIRE (p. 273).

Messrs. Sipe and Wire are the gentlemen from whose patch the watermelons are said to have been carried by the 1873 flood, — the accident which is supposed to have given the freshet the name of the "watermelon flood."

In this connection, it is a fact worth mentioning that complainants' witness, DAVID SMITH (p. 1894, rejoinder), who has been living in the immediate neighborhood of the Yellowbreeches Creek since 1870 or 1871, and who, being a carpenter, has had considerable to do at different times with the repair of these bridges, testifies, in *cross-examination*, that he recollects the high water of August, 1873 (x. 46), but does *not* remember hearing that flood called by any particular name, *until since this case came up* (x. 67).

In regard to the alleged destruction of the Fulling Mill Bridge, the depositions of Sipe and Wire bear a suspicious family resemblance.

Both of them testify they became aware of the accident to the bridge by having, severally, occasion to visit, on different matters of

business, the dead man, Andrew Schell, who figures quite largely in defendants' proofs upon this flood-and-bridge issue.

These errands are stated to have been within a day or two of each other, and within a very few days after the flood. SIPE says his journey was within a couple of days afterward (int. 18), and that the Fulling Mill Bridge being gone, he *waded* across the stream at the spot where the bridge was (x 41, 42).

WIRE, who says that his journey to see Schell was the next day after the flood, says also that, the bridge being away, he turned back and went to Schell's three or four days afterwards by another route (int. 29–34), thus avoiding having to cross the creek.

It does not add to the credibility of the two stories that Sipe and Wire are relatives, and were, at the time of the alleged destruction of the bridge, living in the same place and engaged in business together. It is, to say the least, somewhat unlikely, under such circumstances, that one of them should have undertaken his journey across the bridge in ignorance of its having been carried off, if the other had previously become aware of the fact.

The witnesses besides Mrs. Ellen Shaffer, who pretend to have knowledge of the destruction of both the Clover Mill and the Fulling Mill Bridges, are: —

GEORGE W. ATTICKS (p. 300, surrbtl), who swears, in pretty positive terms, that the flood carried away both of these bridges, to his own knowledge; he did not see the water carry them away, but saw the places where they were *afterwards*. Just how or when or why he happened to see the places does not appear.

Atticks swears in just as positive terms that the Liberty Forge foot bridge was carried away at the same time; an allegation which the testimony of Mumma and Boyer, already referred to, sufficiently shows to be untrue. Moreover, Mr. Atticks, in his cross-examination, while admitting that he has frequently known and heard of bridges being carried away on the Yellowbreeches (as many as twenty), betrays a woful lack of memory for the dates of any of these accidents, except the particular one that he is called to swear to. Questioned on the subject, he is not able to give the dates of any of these accidents, except that the Clover Mill Bridge was carried away in 1863, at the time of the Gettysburg battle.

ISAAC GRAY (p. 310, surbtl) also testifies to the destruction of the Clover Mill and Fulling Mill Bridges, and says that *he* knows, because he had business to go across and could not get across. How long this was after the flood he can hardly tell; it might have been a couple of days.

In cross-examination, Mr. Gray betrays the same lack of memory as Mr. Atticks, for the dates of any accidents to bridges except the particular one which he is called to swear to; and the exact value of his alleged recollection is sufficiently shown by the fact (appearing from complainants' testimony in rejoinder) that he was one of the men who, with Smith, Umberger, McAllister and Shaffer, helped to rebuild the Clover Mill Bridge in 1875 (see Smith, int. 27, p. 1897, rejoinder), and yet in his cross-examination Gray says that he does not know whether the bridge was ever carried away since 1873; doesn't mind if it has; can't tell when he first saw it up after the flood of 1873; don't know whether he saw it up in 1874 or in 1875; don't mind if he did; and don't remember any other floods on the Yellowbreeches since that of 1873 (x 63–67).

We have already referred to such parts of complainants' rejoinder as are in direct contradiction of specific statements of defendants' witnesses, and it only remains to mention briefly the evidence in rebuttal of the general proposition that the 1873 flood carried away the Clover Mill and Fulling Mill Bridges.

Reference has already been made to the testimony of DAVID SMITH, for complainants (p. 1894, rejoinder), showing that it was in 1875, and not in 1874, that James Shaffer and others rebuilt the Clover Mill Bridge. Mr. Smith produced his bill for the lumber used in that work, which bill is dated June 8, 1875, and is copied on p. 1900 of the rejoinder record.

It appears that Mr. Smith is a carpenter by trade, and having, since the spring of 1870 or 1871, resided in York County, very near the Clover Mill and Fulling Mill Bridges, he has been employed, at different times, in making necessary repairs to these bridges; and he shows from his books that, in June, 1871, he rebuilt the Fulling Mill Bridge, and in August of the same year the Clover Mill Bridge,

and again, in June, 1875, and in May, 1879, did repairing work on one or other of these bridges (int. 7, p. 1895).

This indicates that if either of these bridges had needed to be repaired in the summer or fall of 1873, Mr. Smith, in all probability, would have had something to do with the work. For this reason, and because of his continued residence near to these bridges, his statement (int. 35, p. 1899), that *he has no recollection of either of the bridges having been carried away by the flood in August*, 1873, is entitled to very much more consideration than the contrary testimony of the alleged "casual" witnesses for defendants.

In *cross-examination* (x 46), Mr. Smith says that he recollects the flood of August, 1873, and (x 48) he narrates certain incidents which happened in connection with that flood; he recollects the important fact of Sipe and Wire's watermelons having been carried away (x 68, 69) but states (x 67) that he does not remember having heard the flood spoken of by any particular name *until since this case was up.*

Mr. Smith is another one of the several parties who were summoned to Harrisburg by defendants during the taking of their surrebuttal (*int.* 36): *he went there, saw defendants' counsel, showed them the account books referred to in his deposition for complainants, and the result was that defendants* DID NOT *call him.*

DANIEL WEAVER (p. 1917, complainants' rejoinder) was supervisor, in 1875, of that part of Lower Allen Township containing the Fulling Mill and Clover Mill Bridges, and it was under his supervision that Mr. Smith, with the assistance of Shaffer and others, rebuilt the Clover Mill Bridge in that year.

In *cross-examination* (p. 1924) Mr. Weaver says that he remembers the flood in the Yellowbreeches in the summer of 1873; and he fixes the times by the circumstance of its being the first year of his son's living on a certain farm, on the banks of the Yellowbreeches; and by the fact that his son's fences were washed out by the flood. He is asked (x-int. 51), "*Do you remember any other damage that was done by that flood?*" and he answers, "*No, sir.*"

Mr. Weaver also was summoned to Harrisburg by defendants, in the fall of 1883, *during the taking of the surrebuttal; went there,*

saw defendants' counsel, was examined, produced his book and was not called. (Int. 36, 37, p. 1923.)

In addition to these witnesses, and Greenfield, McAllister, Harro, and Kimmel, already referred to, complainants, in rejoinder, called HENRY M. BITNER (p. 1929), a responsible property owner in the vicinity, and who, in the year 1873, was supervisor of that part of Lower Allen Township in which the Clover Mill and Fulling Mill Bridges are situated. If any living man should know the truth and the whole truth on the subject, it is Mr. Bitner, whose office as supervisor, in 1873, required him to be advised of the need, and to see to the making, of any repairs to bridges, during his term of office. It is simply impossible that defendants' story as to these bridges having been carried away by the flood of 1873 should be true, and Mr. Bitner be unaware of the fact, and no trace of it be found in the book of account, which he kept during his term of office.

Defendants so far recognized this fact, that they had one of their agents interview Mr. Bitner, in the summer of 1883, and, therefore, before the taking of their surrebuttal testimony, and with a result so unsatisfactory to themselves, that, as in the case of Supervisor Eshleman and Supervisor Weaver, they discreetly refrained from calling him. (Bitner, x-int. 95, 96.)

It further appears that during the taking of the surrebuttal testimony, the same agent for defendants, Abraham Shank, borrowed from Mr. Bitner his supervisor's account book for 1873, and that it remained in Mr. Shank's possession for a considerable period of time; but Mr. Bitner's books had no more comfort for defendants than Mr. Bitner himself, and for reasons which will presently appear (p. 2352, complainants' closing proofs).

Mr. Bitner testifies positively for complainants that no bridges in his district over the Yellowbreeches Creek were carried away during 1873 (int. 5, x 47); that he did not repair or build any foot bridges during that year.

He was cross-examined at great length, with a view chiefly, it would seem, to extort from him an admission that he did not attend very closely to his official duties as supervisor, and that repairing work was done during his term without his per-

sonal superintendance or knowledge. He frankly admits that he did not personally supervise *all* the repairing work done during his term of office, but says (x 74) that he left very little for others to supervise, (x 75) that there was very little done, that he did not see how it was done. He says positively (x 57) that if foot bridges had been carried away, he would have soon got notice to put them up, and would have recollected it; (x 88) that no foot bridges were carried away in his part of the township that year; (x 90) that he put none up that year; (x 91) that his recollection and his book together decide that for him; and (x 95 and 96) that although he told defendants' agent Shank, in the summer of 1883, "at a quick question," that he did not recollect whether he had repaired any foot bridges, after taking time to think and having his book, together, he was sure that it was not the case.

It only remains to be noted that defendants indulged in this cross-examination after (as the record shows) Mr. Bitner's supervisor's book had been in their possession, and consequently after they had learned that the book contained nothing whatever which could by any possibility be construed as referring to any such considerable work as the rebuilding of a bridge or bridges over a creek of some width. They have not ventured to *directly* assail the correctness or good faith of Mr. Bitner or his book.

Besides the testimony of Mr. Bitner, conclusive in itself, complainants have that of ADAM HENRY ZINN (p. 1955, rejoin'er), already referred to in connection with defendants' witness, Mrs. Ellen Shaffer.

Mr. Zinn lives, and has for years lived, close by the Clover Mill Bridge, and during the years 1873, 1874 and 1875 had occasion to cross that bridge in the ordinary course of business, in carrying on his farm (ints. 49, 50).

One of the fields was on the York County side of the creek (int. 51), while his residence was on the Cumberland County side.

He testifies positively, that the bridge was not carried away in August, 1873; was not down during a considerable part of that summer; and that Henry M. Bitner never put up that bridge as supervisor. (Ints. 52, 53, 54.)

At this point defendants abandoned the controversy as to the Etter & Shanklin Bridge, which was the only material question, if there was anything material about it; and also as to the Fulling Mill Bridge, and the Liberty Forge Bridge; but thinking seemingly that their utter failure to carry away either of the two bridges referred to by their original witness, Hoffman, might be, in some degree, compensated for by proving that *some* bridge, not referred to by Hoffman at all, had been carried away, concentrated all their energies upon the task of destroying the Clover Mill Bridge; and found for their purpose five persons ready to swear that they had been eye-witnesses to the partial carrying away of the bridge by a tree top, which came down on the flood.

Of these five witnesses, two, *John Y. Fettro* (p. 2, surrejoinder) and *Jacob K. Schell* (p. 22), are uncles of the Mrs. Ellen Shaffer whose extraordinary story on behalf of defendants is so completely demolished by complainants' rejoinder. These men were living in the immediate neighborhood at the time her testimony was given; and if the stories which they now tell were true, and they had been prepared to tell them at the time she testified, their testimony would have been infinitely stronger for the defendants than her own.

Two of defendants' new batch of witnesses, *Edward P. Springer* (p. 16, surrejoinder) and *Jacob K. Schell* (p. 22), swear that the occasion of their pretended knowledge was an errand to the creek, on which errand they were accompanied by the George W. Atticks, who was one of defendants' witnesses in surrebuttal. At the time *his* testimony was given, *they* were just as accessible as when called at a later stage of the case, *after* the testimony of Atticks and his co-swearers had been upset by the complainants' proofs in rejoinder.

Atticks's testimony in the surrebuttal does not give the slightest hint that he had, then, any knowledge or recollection of the alleged events now sworn to by Springer and Schell. He compensates for this, however, by reappearing in the surrejoinder (p. 35), to remember *so much* of Springer and Schell's story as he can do without contradicting his own former story.

Another of these alleged eye witnesses, FREDERIC DECKMANN (p. 11, surrejoinder), is a *brother* of the Samuel N. Deckman who

testified for defendants in their surrebuttal; *he* too was just as accessible then as now; and his testimony as that of an alleged eye-witness to the accident to the bridge would, if true and produced at the proper time, have been much stronger than that of his brother.

In brief, the surrejoinder was simply a conspiracy to bolster up the testimony of Mrs. Ellen Shaffer, G. W. Atticks, and Samuel N. Deckman, by that of their own immediate relatives and friends, after they had themselves been effectively contradicted.

In addition to this, Samuel N. Deckman himself (p. 78, surrejoinder) reappears to deliver an appendix to his former story, infinitely more particular and circumstantial than the original story itself, and his new efforts are ably seconded by his son-in-law, George Martin (p. 66, surrejoinder), who had also testified in defendants' surrebuttal, and by Deckman's daughter, Minnie (p. 63, surrejoinder), who makes her first appearance on the stage. The young lady's part in the play is to remember, and give a graphic representation on paper, of the very tree top which did the mischief. The young lady is now only twenty-one years old, and so during the time when according to her story she was accustomed to gaze at this tree top, was only from ten to twelve years of age. What weight can be attached to such evidence, produced under such circumstances? Defendants chose to make a special and formidable issue of this flood-and-bridge question, spent nearly half a year of time, and went to great expense and trouble to discover and develop in the vicinity all the evidence on the subject which would suit their purposes, and they had the assistance of local agents having an extensive acquaintance in the neighborhood, and possessed of vast zeal and little conscience.

As a result of these efforts, they produced in their surrebuttal no fewer than thirty-one witnesses, and while many of these are little to the purpose, there was a sufficient number of them to give a formidable air to the particular story which they undertook to establish. Complainants in their surrejoinder, by a much smaller quantity, but infinitely better quality, of evidence, including the testimony of those, or some of those, persons who had been rejected by defendants (because, having been in the best position to know

the truth, and being disposed to tell the truth, the truth as they knew it and would tell it was not what defendants wanted), completely shattered the fabric which defendants had so painfully constructed.

In all that was material in this issue, the defendants were completely beaten, and tacitly acknowledged the fact; but in their surrejoinder they seek to save some small fragment, however immaterial or irrelevant, out of the wreck. For this purpose they summon sixteen witnesses, of whom the most material are relatives or friends of some or other of their surrebuttal witnesses, and who then, as now, were living in the immediate vicinity, so that there is no *excuse* whatever for the failure to call them during the taking of the surrebuttal, nor any imaginable reason for that failure, except the disgraceful reason that these people were not, *at that time*, prepared to tell the story which they now tell; that they did not then know or remember these things; and this, notwithstanding that the 1873 flood and supposed destruction of bridges had, for months previously, been a subject of common talk in their neighborhood.

FETTRO (p. 2), F. DECKMAN (p. 11) and GEORGE F. HARRING (p. 27, surrejoinder) tell the story in substance, that living in the neighborhood of the creek, they heard about the flood and went down to the creek together to see it, and arrived just in the nick of time to see a tree top come down the stream, strike the Clover Mill Bridge, and carry part of it away.

DECKMAN adds to this that he afterwards saw some of the piers of the wrecked bridge lying on an island a little distance below the bridge, and known as "The Island at Hess."

FETTRO, in cross-examination, says that he cannot remember anything else about any other floods in the Yellowbreeches while he has lived in that vicinity, and does not remember how many times the Clover Mill Bridge has been carried away.

All of them admit that they had been hearing a great deal of talk in the neighborhood about this flood and the alleged carrying away of the bridges, for a long time before testifying; but the memory of no one of them is good enough to allow him to mention the name of a single person whom he has heard talking about it, except

that Fettro admits that he had been spoken to on the subject by his niece, defendants' witness, Mrs. Ellen Shaffer (x 91, 94).

Other alleged eye-witnesses to the carrying off of part of the bridge are EDWARD P. SPRINGER (p. 16) and JACOB K. SCHELL (p. 22). Their story is that in the summer of 1873, Springer and George W. Atticks (one of defendants' witnesses in surrebuttal) jointly owned a boat on the Yellowbreeches Creek, and that the trio went to the creek together to move the boat to a safe place, their errand being, fortunately, so timed that Springer and Schell, *after* Atticks had left the party, witnessed the breaking of the bridge by the tree top. We may be allowed the surmise that Atticks was not of the party at just *that* moment, only because in his former deposition he had unfortunately committed himself to the statement that he did *not* see the bridge carried away (int. 11, p. 301, surrebuttal).

It is sufficient, however, that in that deposition Atticks made no allusion whatever to this alleged trip to the creek with Springer and Schell, and therefore had no recollection or knowledge of it then.

In addition, a Mrs. ELIZA COLLINS (p. 31, surrejoinder) testified that she saw the bridge coming down the stream, past the house where she then lived; saw the long part of the railing. It was taken by a large tree top coming down. Did not see the tree, but saw the tree top floating down, and it had part of the timber with it.

ADELINE MOSER (p. 45) and JACOB W. MOSER (p. 50) and Mrs. CLARA BOYER (p. 54) also testify to the alleged taking away of the bridge by a tree top, Mrs. Moser and Mrs. Boyer stating that they so testify because they were *told* so at or about the time of the accident by neighbors.

It appears from the testimony of all these witnesses that they lived near the creek during a number of years; and it appears, also, that this Clover Mill Bridge has been carried away a number of times in different years.

PETER HESS (p. 56) testifies that he was farming a place a short distance below the bridge, on the York County side, in 1873, and from the spot on the banks of the creek where he was accustomed to

water his horses he saw, at the far end of the island at Hess's, a log containing a limb, with a pier or pillar of a foot bridge.

On cross-examination, Mr. Hess says that he lived on that farm from childhood down to the year 1880, and was accustomed, during the years before and after 1873, and down to 1880, — when he left the place, — to water his horses at this particular spot.

It also appears from Mr. Hess's testimony (x-int. 57 to x-int. 60) *that he had been summoned by defendants to testify in this case, and had attended at Harrisburg for the purpose, and had seen defendants' counsel there, in November*, 1884, *during the time when defendants' surrebutting proofs were being taken.*

That he was not called then, may be taken as a sure indication that his memory, at that time, was not what he says it is now.

Samuel M. Deckman, in his testimony in the surrebuttal (p. 247), had stated that he visited the Clover Mill immediately after the flood, going up there to see the foot bridge, having been told by his neighbor, Andrew Schell, that part of it had been carried away.

The manner in which this statement came out (x-int. 36, re-direct int. 42) indicated very strongly that no such statement had been made by him to defendants' agents or counsel before he was put upon the stand.

Upon this foundation, however, Deckman (in surrejoinder, p. 77) builds a very elaborate story, the main new feature of which is that Andrew Schell asked him to assist in repairing the bridge a month or two after the flood, but that he refused to do so, because having been troubled with rheumatism, he was not willing to work in the water. To this he adds, that on several occasions between the flood and the repairing of the bridge, he saw the tree top which had done the mischief, and part of the bridge timber, along the creek, these occasions being, according to his story, for the most part, fishing trips, to which, he tells us, he was at that time accustomed to devote *rainy days*. Was it when he told this story, or when he went fishing, that he temporarily forgot his rheumatism?

The Andrew Schell part of the story is simply a weak attempt to surmount, as to this one of the bridges, the great difficulty which defendants found in the way of establishing the story they wished to

establish, as to any of them. They could find witnesses in plenty to knock the bridges down, but no one to know anything about the rebuilding of them. The supervisors, whose duties were to see to the repairing or rebuilding of the bridges when they needed it, knew nothing to the purpose, and their accounts showed nothing calculated to give defendants the least comfort, and they were not able to find a single living witness, if we except James Shaffer and Henry S. Magonnell, willing to take the responsibility of saying that he had been concerned in the rebuilding of any of these bridges after the flood of 1873. It is the custom in that vicinity, as the record shows, when the bridges need repairing, for the supervisor to obtain the assistance of residents in the neighborhood, so it was in June, 1875, after the Clover Mill Bridge had been taken away by ice. The then supervisor, Mr. Weaver, obtained labor from neighboring residents; and complainants have had no difficulty in producing five living witnesses who worked at the repairing of the bridge in that summer. Had the bridge in fact been carried away in 1873, and subsequently repaired, defendants, with as little difficulty, could have produced living witnesses to the fact; but as it is not true, they have been compelled to devolve the task upon a dead man.

The only witness, besides Samuel M. Deckman, found to tell this story, is the Mrs. Eliza Collins already referred to (p. 31), who asserts (int. 17) that the bridge was put up the same fall (1873); that Mr. Henry Bitner was supervisor, and "Mr. Andy Schell did the work."

This same Mrs. Collins, although able to testify to a number of other occasions when the bridge was down, is unable to say who, on any of these other occasions, put it up again, except as to the rebuilding in 1875, when she says Daniel Weaver was supervisor, but is unable to name a single other person who took part in the work (p. 34).

Mrs. Ellen Shaffer is the daughter of the dead Andrew Schell, whom defendants credit with the rebuilding of the bridge in the fall of 1873. When she was on the stand she did not undertake to swear to any such story, so that it is certain that at the time she testified no such story had occurred to her, or to her friends and rela-

tives. Furthermore, the Jacob Schell who figures in the surrejoinder as one of the alleged eye-witnesses to the carrying away of the bridge is a brother of this Andrew Schell, but does not appear to know of Andrew's having rebuilt the bridge at the time in question, although he does testify to his having done so on a previous occasion (x-ints. 31 to 35, p. 26, surrejoinder).

It appears from the testimony that Andrew Schell was supervisor in 1876 (Rupp, int. 18, p. 232, surrejoinder); and Samuel Deckman testifies that he thinks the bridge was down in 1876 (cross-int. 230), and has been down twice, he guesses, between that and the present time; is not positive about it.

We mention this simply because it indicates that there may possibly be a certain amount of foundation in truth for Deckman's testimony as to having been invited to repair the bridge. The men were near neighbors up to the time of Schell's death, and it is not improbable, therefore, that in 1876 Schell may have asked Deckman to help repair the bridge; so that the false or mistaken part of Deckman's story may be simply the attributing to 1873 of that which really happened in 1876.

Defendants called HENRY S. RUPP (p. 227, surrejoinder), for the purpose of attacking Supervisor Bitner, by showing that that gentleman, during his term of office, was in the habit of giving out most of the work by contract, and did not look after it as other supervisors had done.

In connection with Rupp's testimony, defendants introduced the records of the statements of accounts of the supervisors of Lower Allen Township for a period of twenty years or thereabouts, for the purpose of showing that the supervisor's accounts in and for the year 1873 were unusually high, while the amount charged by and paid to Mr. Bitner for his personal time and labor was unusually small.

The attempt was also made to have Mr. Rupp testify that there was difficulty in settling Mr. Bitner's books on account of his lax manner of conducting the business of his office; but this attempt was a failure, Mr. Rupp testifying that there was no difficulty in the settlement of Mr. Bitner's accounts when they came before the auditors (int. 27).

Mr. BITNER was recalled by complainants (p. 2352, complainants' closing testimony) for the purpose mainly of producing his supervisor's book, which he had not been able to produce when on the stand before, because it was in possession of defendants' agent, Shank. Mr. Bitner repeats the statement of his former testimony, that the Clover Mill and Fulling Mill Bridges were *not* down and were *not* repaired during his term of office; and that it is simply impossible that they should have been down and have been repaired during that time without his knowledge. He produced his supervisor's book; and it appears (p. 2352) that the total of the footings of that book correspond exactly with the charge appearing in the settlement of Mr. Bitner's account entered in the auditor's book, produced and testified to by defendants' witness, Rupp.

Mr. Bitner's book contains items showing the work he had done by different individuals during his term of office (int. 9); and he states (int. 10) that it includes *all* the work he did, or got done, while he was supervisor in 1873. On the eleventh page of this book is the following entry: —

"Andrew Schell, work and lumber . . $3 50"

Mr. Bitner says (int. 11) that the work referred to in this charge was either fixing small road bridges, or a little work on the road. *This entry is the only reference to Andrew Schell in the book;* and it completely gives the lie to the story that Andrew Schell repaired the Clover Mill Bridge in the fall of 1873.

Deckman's account of the amount of damage done to the bridge by the flood of 1873 shows that it could not have been repaired, except at considerable expense for material and labor. He says, in substance, that the whole York County side of the bridge was carried away; that of two piers in the stream, one was carried away, and one only left standing; and that such parts of the stringers and flooring of the bridge as were not actually carried away were swept off the piers and secured only by being chained to the Cumberland County bank (x-int. 72–80, 173–178, 179).

It would take a good many times $3.50 to repair this damage, and it is preposterous to suppose that Andrew Schell, or any one else, would have voluntarily undertaken the task of repairing it, without

communicating with Supervisor Bitner. Even if it could be supposed that such a work would be undertaken without Mr. Bitner's foreknowledge and supervision, it is impossible to suppose that during the progress of the work, or after it was done, it did not come to his knowledge, and did not figure in his official accounts.

Mr. Bitner's book is conclusive proof that defendants' "eleventh-hour" story about this Clover Mill Bridge is a deliberate falsehood, and defendants undertook to prove this falsehood, after the book had been in their possession.

Had it been the fact that Andrew Schell attended to the repairing of the bridge, he certainly did not do the work single handed: the labor of a number of men would be required for such a task, and defendants would have had no difficulty in finding and producing, as witnesses, persons who had participated in the rebuilding of the bridge at that time.

In this connection it may be noted again, that complainants were able to find and produce five men who helped to repair this same bridge in June, 1875,after it had been swept away by the ice flood of that year.

This flood-and-bridge issue is a striking example — and this is its sole importance in the case — of the utter worthlessness of just such testimony as that upon which the entire story as to the talking machine rests.

Defendants, desiring to prove a particular case, had no difficulty in obtaining a quantity of available testimony after the vicinity from which the desired testimony was to come had been diligently cultivated, through the medium of local agents and partisans. Some of the testimony to the carrying away of all these bridges on the Yellowbreeches Creek, by the flood of 1873, is just as positive as most, and a great deal more positive than very much, of the testimony as to the existence of talking machines at Drawbaugh's shop at different early dates: but, fortunately, the nature of the questions involved enabled the complainants to meet and utterly overthrow this seemingly formidable proof. This they have done by the testimony of persons who, from official position or from residence, were in the best position to know the truth, and by contemporaneous documentary proof.

This evidence used by complainants was accessible to and actually known to the defendants, and they rejected it, because it did not answer their purpose. They resolutely shut their eyes to the truth, and undertook to prove a falsehood, by the testimony of a number of alleged "casual" witnesses; just such witnesses as assert that they happened to be at Drawbaugh's shop, and to see talking machines there, at particular times. Before these witnesses were called, the whole district was educated, by dint of making the subject common talk, and discussing it from defendants' point of view, until, no doubt, many of the parties learned to regard what was really talked into them, as supposed recollections of their own. But complainants found no difficulty, in this particular case, in completely overthrowing the structure thus erected by the defendants, and defendants invited and enlarged their defeat by unnecessarily enlarging the issue, and undertaking to prove things which it was not necessary to their case to prove. To show that the Clover Mill and Fulling Mill and Liberty Forge Bridges were carried away, was not to show that the Etter & Shanklin Bridge was carried away, and was utterly immaterial, after they had shown by their own proofs that the latter bridge was *not* washed away. Yet they assumed this unnecessary and useless labor, and with the result that they met with defeat at every point, because, in the nature of the subject involved, it was possible for complainants to meet their testimony with direct contradiction and disproof.

The result of this controversy is valuable, in so far as it illustrates the worthlessness of just such testimony coming from just such people as constitute the mainstay of defendants' case as to the main issue.

THE HYDRAULIC-RAM ISSUE.

This is a controversy as to the date at which a certain hydraulic ram was ordered from Daniel Drawbaugh and as to the date at which that ram was put in, upon a farm near Marysville, Perry County, Pa., owned at the time by one Thomas Draper, and tenanted by one George W. Kissinger.

This controversy arose out of the testimony given for defendants by Thomas W. Draper (p. 1164, defendants' case). Mr. Draper was a late and volunteer witness for the defence, and testified in substance that he had seen a talking machine at Drawbaugh's shop upon the occasion of visiting that shop in company with George W. Kissinger for the purpose of ordering the hydraulic ram referred to. He gives the spring or summer of 1874 as the time of this visit, stating in a general way that it was shortly after the date (April, 1874) of his lease of the Perry County farm to Mr. Kissinger.

His recollection as to the time at which the visit occurred is not at all definite. He says, "I couldn't say positively, but I *think* it *must* have been in the early part of the summer, or it may have been in May, possibly; I know it was shortly after Mr. Kissinger moved on the place. He complained that his wife had to carry water too far, and he wanted me to put in the ram."

To a leading question, he answers that he is sure it was in the same spring or summer of 1874. Asked if he knows when that ram was put on the farm, he says, "I do not; but I don't think it was put in until 1875." The arrangement was made, that Kissinger was to cut down saplings and bore out the piping until he had enough to reach from the spring to the house. He had trouble in getting an auger to bore the piping, but at last succeeded in getting one and made the pipes. Then the ram was put in by Drawbaugh, but I was not present when it was put in, and do not know exactly when it was done." (The proofs show that only the pipes between the ram and the spring were of wood, those between the ram and the house being of iron.)

On cross-examination (p. 1174), being asked whether he was to be understood as saying that the visit to Drawbaugh's shop was for

the purpose of ordering a ram, but it was the following season when the ram was actually delivered and put in, he replies, "So far as my visit to Drawbaugh's shop is concerned, that is correct; but I am not certain that I said positively that the ram was *not* put in until the next season. *I am not certain about that, but I am of the opinion that it was not put in until the next season.* I know that there was considerable delay about getting the wooden piping bored, and I wrote to him several times about it, *and Kissinger did not get it in until some time in the following season. I was anxious to see how the ram would work.* Kissinger's excuse to me was that he could not get an auger to bore the pipes with. I think it was some time late in the season. *I think it was in the fall of* 1875, *some time, when he put the ram in; that is my impression.*"

From this, it appears that, while Mr. Draper was not positive as to the time of the putting in of the ram, his decided impression was, at the time he first testified for defendants, that the ram was ordered in one year, and was put in not later than the next following year. The doubt in his mind was not whether the interval between the two events might not have been longer than that, but whether he was correct in his impression that the interval was *as long* as a year.

So far as the connection of the visit to Drawbaugh's shop with the granting of the lease to Kissinger is concerned, Mr. Draper's testimony was a matter of arbitrary memory or argumentative assumption, based upon a mere impression, actual or pretended, that the idea of an hydraulic ram was not only broached but acted upon soon after the lease. Mr. Kissinger was his tenant of the Marysville farm from the spring of 1874 to that of 1880; so that there was a period of six years, during any part of which the event might have happened. During this entire period Mr. Draper was residing in the State of Delaware, many miles from the residence of his tenant, Mr. Kissinger, and from Eberly's Mills. His visit with Mr. Kissinger to Drawbaugh's shop was at some time when he, Draper, was upon a visit to his tenant, Kissinger, at Marysville.

He offers no proof whatever to show, nor does he positively state, that he did visit Kissinger so soon after the commencement of Kissinger tenancy as May, 1874. His most definite statement on this point, when not led by the questions, is, that "he *thinks* it must

have been the early part of the summer, or it *may have been* in May. He knows it was shortly after Mr. Kissinger moved on the place."

As to the time the ram was put in, he is even more indefinite; his only decided impression seems to be that there was an interval of not more than one season between the ordering of the ram and the putting it in.

Upon this issue, as upon the flood-and-bridge issue, all the testimony proceeding from parties who were directly connected with the transactions concerned (if we except Mr. Draper) is with complainants, while defendants' case depends upon the testimony of a cloud of witnesses, who, having had no personal interest whatever in this subject of the hydraulic ram, yet claim to have knowledge on the subject, derived through some accidental circumstance.

Complainants have shown not only by the testimony of the Kissinger family during whose occupancy of the place, and for whose immediate benefit, the hydraulic ram was ordered and put in, and who were personally concerned in the work of putting it in, but by other testimony, and by conclusive documentary evidence, that the ram *was not put in until November*, 1878. So conclusively is this shown that Mr. Draper himself, when recalled by the defendants at the very latest stage of the case, was constrained to admit that he was satisfied of the incorrectness of his original impression that the ram was put in so early as 1875, and was satisfied of the fact that it was not put in until 1877 or 1878.

This is the form of Mr. Draper's admission as given in cross-examination in his testimony for defendants in surrejoinder (x 56, p. 183). Shortly before that time he had voluntarily written a letter to one of complainants' counsel, which letter is in evidence (see p. 253, defendants' surrejoinder), and in which Mr. Draper positively admits that he "*feels sure* the ram was not put in *until* 1878."

This letter was written by him shortly after his wife and daughter (see depositions of Mrs. Thomas Draper, page 1880, rejoinder, and Miss Virginia M. E. Draper, page 1886, rejoinder) had given testimony for complainants completely confirmatory of the statements of Kissinger, and the members of his family, that November, 1878, was the time at which the ram was put in.

That date having thus been established by the testimony or admission of every party connected with the ordering and putting of this hydraulic ram (for Mr. Drawbaugh's silence, of course, is to be treated as such an admission), it is not very necessary to examine at length, or perhps to examine at all, the mass of testimony taken by defendants to swear the ram in two years or more before that time; but the testimony which defendants used for this purpose is of precisely the same kind as that which they have used to establish the existence of Drawbaugh's talking machine, and it is of interest, therefore, with reference to the main issue in the case, to analyze it; and, furthermore, the record as to this hydraulic-ram issue presents some highly interesting and suggestive illustrations of defendants' methods in procuring and producing what they call evidence.

For these reasons, therefore, and not because it is at all necessary for the purpose of d termining what the truth is about this matter of the hydraulic ram, we propose to discuss as succinctly as possible the salient features of the evidence relating to this side.

The most extraordinary feature about this part of the case is, that the man who made the ram and who put it in was Daniel Drawbaugh, the claimant in this case; and that this man, who should be able to give the most authentic information on the important subject of the time, *and into whose hands his own bill for the work of making and putting in the ram has been traced by testimony extracted by defendants themselves from one of their own witnesses* (Wise, q. 26–28, p. 930, surbtl), *is not asked to testify on the subject.* He is not called even to deny possession of the bill or to say that he has looked for it and cannot find it, and his silence is an admission that he has it. *He* knows whether the dates given in the evidence for complainants, or those which his counsel have endeavored to establish for defendants, are correct, and his lips are sealed. The only possible inference to be drawn from such a state of affairs is, not only that the case which defendants have undertaken to establish on this subject is not the truth, but that Drawbaugh knows it to be untrue; and that, while unwilling to subject himself to the risk of swearing falsely upon this particular subject into which it was possible for complainants to inquire with fair chance of getting at the truth, he *was* willing to stand

by while witness after witness was called to establish a lie, and that defendants were content to have him do so.

In connection with the testimony of George W. Kissinger (p. 552, complainants' proofs), complainants have produced the bill of Morris, Tasker & Co., of Philadelphia, for the iron pipe which was used for this hydraulic ram, and this bill is dated July 1, 1878. They have also produced the freight bill of the Pennsylvania Railroad Company for the transportation of that pipe from Philadelphia to Marysville, and that bill is dated July 2, 1878.

In connection with the freight bill, they have produced the written order of Daniel Drawbaugh to the station agent at Marysville for the delivery of the pipe to Mr. Kissinger, and that order is dated Sept. 6, 1878.

Copies of these documents are printed on pages 554 and 555 of complainants' proofs.

In complainants' record (p. 555) the date of Drawbaugh's order for the delivery of the pipe was incorrectly printed Sept. 26, 1878. This error was corrected in complainants' closing proofs (p. 2491), where the true date of the paper, Sept. 6, is given.

The bill of Morris, Tasker & Co. for this pipe *came from the possession of Mr. Drawbaugh himself*, having been produced by him in response to cross-examination while on the stand for defendants (see p. 1068, defendants' printed record) as a bill for pipe purchased to go with one of his rams.

Mr. Kissinger testifies (p. 554) that the bill is for the pipe which was used in connection with the particular hydraulic ram in question, and no attempt has been made on the part of defendants to deny or dispute that statement. Besides, Morris, Tasker & Co.'s bill, and the freight bill correspond. It is to be regarded, then, as an admitted fact, that Morris, Tasker & Co.'s bill, the freight bill and the accompanying order by Drawbaugh to the station agent for the delivery of the pipe to Kissinger, refer to pipe procured for use with this hydraulic ram.

The freight bill and order came from the files of the railroad company at Marysville station, where they were as accessible to defendants as to complainants.

Mr. Kissinger tells us (see p. 559, complainants' record), and it is

not denied, that he was visited by Drawbaugh and one of his counsel, he believes, in March, 1882, and that they asked him about the time the ram was put in, or the time Draper was down, and *that at that time he gave them the date of* 1878; *that the ram was put in in* 1878. He says that he endeavored to find among his papers something which would throw light upon the subject for their benefit, but found nothing at that time, and that he told them that if they would go to the Pennsylvania railway depot at Marysville they would find there the receipts and the bill, *which would show when the pipe came.*

Thus defendants had pointed out to them the direct avenue to the truth. Whether or not they so far availed themselves of Mr. Kissinger's suggestion as to consult the papers referred to by him and inform *themselves* of the truth does not positively appear, although the station agent at Marysville, Samuel G. Geib, testifies (see p. 582, complainants' record) that he had not shown these papers to anybody before showing them to complainants' counsel in the spring of 1882. It might seem, therefore, that defendants' counsel did not deem it worth their while to find out what the papers showed. They did not call Mr. Kissinger himself to testify, for the sufficient reason that his recollection did not suit them, and possibly they did not think it advisable to consult documentary evidence which might demonstrate the correctness of Mr. Kissinger's unaccommodating recollection.

It might seem that their policy in this case was precisely what it was about the flood-and-bridge question, — to resolutely shut their eyes to the truth, where the truth did not present an attractive complexion.

It was March 2, 1882, that Mr. Draper was examined for defendants (p. 1164, defendants' record), so that the visit of Drawbaugh, with one of his counsel, to Kissinger, was at or about the very time of the giving of Mr. Draper's deposition; and before the closing of defendants' proofs on the 3d of April, 1882, they knew that Mr. Kissinger's recollection did not agree with that of Draper as to the time the ram was put in, and had had pointed out to them the means of ascertaining the truth of the matter. That they did not call Mr. Kissinger before the closing of their proofs is conclusive evidence that what he had to tell them at that time was not what they wanted;

and this is a matter which it is well to bear in mind when it comes to deal with the question of veracity as between Kissinger and Draper, which arose at a later stage of the controversy.

Complainants have produced about all the documentary evidence which in the nature of the case it was possible to produce on this subject, *except Drawbaugh's bill for the ram and the work of putting it in.* That has been traced into Drawbaugh's own hands, and he neither produces it nor accounts for its non-production; an admission that this bill confirms complainants' evidence.

Besides the documentary evidence, sufficient in itself to show that 1878 was, in fact, the year in which the ram was put in, complainants produce the testimony of GEO. W. KISSINGER (p. 552, complainants' proofs), his sons, JOHN M. KISSINGER (p. 575), GEO. F. KISSINGER (p. 582) and CYRUS KISSINGER (p. 1465), and J. C. ZIMMERMAN, a son-in-law (p. 622).

GEORGE W. KISSINGER testifies that he and Draper went to Drawbaugh's shop to order the ram *in the fall of* 1877 (p. 553); that the pipe to be laid between the spring and the ram was to be made of wood logs, and that accordingly he went to work cutting and getting logs out for the purpose early in the spring of 1878; that for the distance between the ram and the house, small iron pipe was to be used, and that the bill of Morris, Tasker & Co. of July 1, 1878, was for that iron pipe; that the ram was brought from Drawbaugh's shop after the iron pipe came, and that Mr. Drawbaugh came over and put the ram in, — he, Kissinger, bringing him part of the way.

In cross-examination (p. 564), Mr. Kissinger testifies that he had spoken to Mr. Draper about having a ram *several years before he put it in;* that it was nearly two years before Mr. Draper visited the farm after the commencement of his Kissinger's tenancy, and he repeats his statement in the direct examination that it was in 1877 that Draper and he went over to Drawbaugh's to order the ram.

Mr. Kissinger's statement that the matter of having a ram was mentioned and under consideration years before one was put in is important not only in relation to certain parts of the testimony to be considered, but because a careful reading of Draper's first deposition for defendants shows that his assignment of the visit to

Drawbaugh's place to order the ram, to the spring or summer of 1874, is not really a matter of recollection but matter of deduction or argument, from the fact — which Kissinger admits — that at an early period of his tenancy Mr. Kissinger complained about the inconvenience of obtaining water, and suggested the putting in of a ram. Mr. Draper chooses to base upon this the assumption that the suggestion was acted upon soon after the commencement of Mr. Kissinger's tenancy; but the urgency of tenants about such matters is apt to be exceeded only by the extreme deliberation of landlords.

By way of fixing the time of the visit to Drawbaugh's shop to order the "ram," Mr. Kissinger states in *cross examination* (p. 565) that the day before that visit he and Mr. Draper went up to a place called Little Cove, in the vicinity of Marysville, to look at a coal mine there: "We wanted to look at it to see what kind of coal it was. We found the mine was about a mile from the road, up near the top of the mountain, so we did not go up to it. We stopped at the fertilizer mill there and the fertilizer man told us we could not see much if we did go up."

The testimony of JOHN S. FOOSE (p. 611, complainants' record) and SAMUEL A. FOOSE (p. 619) shows the existence, in 1877, of the mine which Mr. Kissinger says he and Mr. Draper started to visit the day before going to Drawbaugh's shop, and shows further that no such mine existed in 1874, when Draper says that visit occurred. It is not pretended that there was any other coal mine in that vicinity.

Mr. Kissinger further testifies (p. 572) that the wooden pipe leading from the spring to the ram, a distance of over two hundred feet, he bored himself, with a little help from his boys, and that he got the auger used for the purpose from a Mr. Keller, who lived up in the valley several miles from Marysville.

JOHN M. KISSINGER (p. 575) testifies, in substance, that he lived with his father at Marysville during the summers of 1874 and 1875, and part of the summer of 1876; left Aug. 12, 1876, for Chicago, and stayed there until the fall of 1877, in December, when he came back. Then stayed home until the twenty-seventh day of May, 1878, when he again started for Chicago, and has never since that been back to the Marysville house. While at home at Marysville, from Chica-

go, between December, 1877, and May, 1878, work was going on about getting in a hydraulic ram to throw water up to the house. "*The ram was not in at that time; they had logs cut and were boring at them, and I helped to finish those logs. The logs were all bored when I left. I never saw the ram in, and working there. There was no ram there at the time.* I was there from December, 1877, to May, 1878." No attempt has been made to disturb John Kissinger's testimony as to his movements, or the times of their occurrence.

GEORGE F. KISSINGER (p. 582) lived with his father at Marysville continuously from April, 1874, to April, 1880, excepting about two months' absence. Worked on the farm for him; remembers his father and Mr. Draper going over to Drawbaugh's shop to see about purchasing the ram. It was the fall before the ram was put in.

J. C. ZIMMERMAN (p. 622) married one of Mr. Kissinger's daughters July 14, 1873; moved his family to Marysville and rented two rooms in Mr. Kissinger's house November, 1875; went to live there himself in January, 1876, and continued to live there up to the time of Mr. Kissinger's leaving the premises in the spring of 1880; is the J. C. Zimmerman who receipted for the pipe referred to in the freight bills and orders put in evidence in the deposition of Geo. W. Kissinger; received the pipe, and hauled it home to Mr. Draper's farm for Mr. Kissinger; that pipe was used for the water pipe of the ram. Remembers Mr. Kissinger and Mr. Draper going over from Marysville to Drawbaugh's shop to see about getting a ram for the farm. *This was in the fall of* 1877. Mr. Drawbaugh came over and put in that ram on the 4th of November, 1878, the day before the election. Witness went to Harrisburg that day with his wife, and when they came home Mr. Drawbaugh was there. That was Monday, the 4th of November; Tuesday was election, the 5th of November.

Witness, with his wife, started to pay a visit to relatives of his within a mile of Lansingburg that day. Remained away about a week, and when they came home the ram was up and running. Mr. Drawbaugh was gone, *and Mr. Draper and his daughter, Jennie Draper, were there* (confirmed by Miss Jennie Draper, p. 1886, complts' rejoinder). When witness and his wife started for Lansing-

burg, on the visit to his relatives, it was in the morning. Witness voted before he started.

A certified copy of the list of voters who voted at Marysville that day is in evidence, and the third name on the list is that of Mr. Zimmerman (see p. 2487, complainants' closing proofs).

Witness's recollection is that the boring of the wooden pipes was commenced during the winter of 1877–8. Fixes 1878 as the time when the wood pipe was bored and the ram put in, because November, 1878, was the only time that he and his wife visited his relatives at Landisburg, after moving to Marysville; because he lifted the pipe for the ram at Marysville station in 1878, and the book shows it; and because "*we only lived there about eighteen months after the ram was put in.*"

Witness further says that he never saw Mr. Draper until the year 1877; and the wood pipe was bored after *he*, Draper, went away from that visit. Zimmerman, during the greater part of the period of his living with his father-in-law at Marysville, was a laborer on the Pennsylvania Railroad at Marysville. A certificate from the auditor of disbursements of the railroad company, offered in evidence (p. 663, complainants' record), shows that in November, 1878, Zimmerman was absent from work between the evening of the third and the morning of the tenth of that month, being the period during which, as he testifies, he was absent with his family on a visit to relatives near Landisburg and during which, as he testifies, the ram was put in.

Cyrus Kissinger (p. 1463, complts' proofs), son of George W. Kissinger, was in Indiana from the spring of 1874 to Jan. 5, 1875, when he left Indiana to return to his father's house. Being hurt by a railroad accident, did not reach home until some time in May, 1875. Remained at home until March 7, 1876, and then went to Missouri for about five months. Came back in the early fall of 1876, and lived and worked upon his father's farm at Marysville. Commenced working on the railroad in January, 1878, while still living with his father. Was married in July, 1878, but continued to live with his father until the early part of November, 1878, his wife during the same period living with her father, Geo. W. Boyer, between Fairview and Marysville, on the River road. Went to

housekeeping some time in November, 1878, and has never lived at his father's house since then.

Witness quit working for the railroad, Oct. 22, 1878. *There was no hydraulic ram on his father's premises at that time, but when he left his father's place in the early part of November*, 1878, *to go to housekeeping there was an hydraulic ram there.*

Witness fetched the ram from Drawbaugh's shop to the farm. This was after witness had quit work for the railroad, Oct. 22, 1878; thinks Thomas Draper came up to his father's house on the Saturday night after the ram was put in (confirmed by Miss Jennie Draper, p. 1886, complainants' rejoinder).

In cross-examination (pp. 1488–9) witness testifies that the logs for the wood pipe were cut in the fall of 1877, and that they lay over by the barn from the time they were cut until the time they were put into the ground. That is where they were when the boring was going on, and they were all bored at that place. *They were bored and put into the ground while they were green.* Does not recollect how long they were lying near the barn before they were put into the ground.

(P. 1493.) Recollects the work of building an observatory and porch at the house on the farm. This was *before* the ram was put in.

Testimony subsequently produced by defendants shows that this work of building an observatory and porch was done in August and September, 1877 (Brabson, p. 969; Taylor, p. 1042, surrbtl). "To my best recollection, this was before the wooden logs for the pipe were cut and brought down to near the barn" (p. 1494).

In redirect examination (pp. 1508–9) witness testifies that the reason for getting the logs bored and under ground before they had time to dry was that his father said if they should be bored and left laying out the wind would crack them.

Thus, according to the testimony of these members of the Kissinger family who were in the best position to know the truth of the matter, the visit of Draper and Kissinger to Drawbaugh's to order the ram was in the fall of 1877; the boring of the wooden pipe to run from the spring to the ram, during the period between the late fall of 1877 and the spring of 1878, and the laying of the several

burg, on the visit to his relatives, it was in the morning. Witness voted before he started.

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Testimony subsequently produced by defendants shows that this work of building an observatory and porch was done in August and September, 1877 (Brabson, p. 969; Taylor, p. 1042, surrbtl). "To my best recollection, this was before the wooden logs for the pipe were cut and brought down to near the barn" (p. 1494).

In redirect examination (pp. 1508–9) witness testifies that the reason for getting the logs bored and under ground before they had time to dry was that his father said if they should be bored and left laying out the wind would crack them.

Thus, according to the testimony of these members of the Kissinger family who were in the best position to know the truth of the matter, the visit of Draper and Kissinger to Drawbaugh's to order the ram was in the fall of 1877; the boring of the wooden pipe to run from the spring to the ram, during the period between the late fall of 1877 and the spring of 1878, and the laying of the several

hundred feet of iron pipe between the ram and the house, and the putting in of the ram itself, in the fall of 1878; and the correctness of these last dates is conclusively shown by the documentary evidence already referred to.

The statements of the Kissengers and Zimmerman are in substantial accord with each other, while there is just that amount of circumstantial difference between their recollections as to some of the details about which they testify and the exact time of the occurrence of those details as is to be expected from, and best proves the honesty of, a number of truthful men called upon to give their independent recollections of a series of events running over a considerable period of time, and the last of which had occurred a number of years before they were called upon to testify about them.

In addition to the testimony already referred to, complainants called JESSE WAGNER (p. 1255, complainants' proofs), who is a mason and stonecutter, and testifies (p. 1257) that he put a wall around the ram to protect it from the frost; that the ram was set in a hole, and he stoned up the sides of that hole (p. 1258). He produces his book and shows from entries therein that he did this work on the sixth and seventh days of November, 1878. He says that he had not known of Mr. Kissinger's having a ram at his place before that fall, and that at the time he built this wall the earth looked as if the work was fresh.

Cyrus Kissinger testifies (p. 1471) that this work of stoning up the pit around the ram was done by Jesse Wagner, and he thinks *not over a day or so after the ram was put in.*

MR. and MRS. GEO. W. BOYER (pp. 1541–46) testify that they visited Mr. Kissinger's place during the peach season of 1878, and that there was no hydraulic ram in at that time; and that they again visited the place in cherry time in 1879, and that then the ram was in.

This evidence shows conclusively the fact that the putting in of the hydraulic ram was in November, 1878, and Mr. Draper's own recollection in his original testimony was that not more than a year elapsed between the ordering of the ram and the putting it in. To assume that Mr. Draper was correct in that element of his recollection, *as to which one point he and the Kissingers are in harmony*, is

necessarily to conclude that he was entirely wrong about the date of his visit to Drawbaugh's shop, as he is conclusively shown, and admits himself to have been wrong as to the time at which the ram was put in, and that the visit to Drawbaugh's shop was not in 1874, but in 1877.

In their surrebuttal, defendants did not undertake to directly deny or rebut the statement of Mr. Kissinger that his visit with Draper to Drawbaugh's shop was in the fall of 1877. They did not call Drawbaugh to say that it was in 1874, as had been deposed by Draper, nor recall Mr. Draper himself to reiterate his former statements, or to produce any new proof in support of those statements. They addressed themselves to the task of swearing the ram in and at work in the year 1876, despite the documentary proof that the iron pipe for it was not purchased and delivered until 1878, despite the deposition of Wagner and the evidence of his book, that the ram pit was not stoned in until November, 1878, and despite the fact that, after five months of diligent preparation, they had been unable to find a trace of any pipe prior to that purchased in 1878, or to find any person willing to say that he had walled the ram pit with stone, or with any other material, before Wagner stoned it up.

They prepared themselves for the task of getting the ram in and running two years or more before the pipe for it was purchased, in very much the same way that they prepared themselves to sustain their witness, Hoffman, upon the flood-and-bridge issue; that is to say, for several months before beginning to take their surrebutting proofs, they agitated this subject of the hydraulic ram in the village of Marysville and its vicinity, until it had become subject of common talk, and, as was very natural under such circumstances, this common talk quickly assumed the complexion which defendants desired it should assume.

The state of affairs brought about at Marysville by the agitation of the subject there is so amusingly and graphically pictured in the *näive* statement of one of defendants' witnesses, — Eli W. Wise, — that we will quote the statement. Mr. Wise keeps a variety store in that hamlet, and he says that between the summer of 1883 and February, 1884, when he testified, he had heard conversations going on *almost ev evening* in his store about this hydraulic ram.

Pressed a little further about the matter (x q. 143, p. 945, surrebtl) he makes this remarkable delivery: "The conversation is nothing more than is usual when anything new occurs, or is ventilated, *just as people will talk about a murder, or a riot, or anything of that sort.*"

Through the medium of zealous and unscrupulous local agents, suggestive inquiries were made of this, that and the other resident in the neighborhood. They were plied, of course, with leading questions involving the answers which defendants desired, and in this way it was a matter of little difficulty to educate a sufficient number of persons up to the point of absorbing and assimilating the story which defendants desired to establish.

The attack upon the subject in the surrebuttal commenced with the depositions of three very respectable gentlemen, Dr. ANDREW J. TRAVER (p. 542), ABRAHAM C. DISSINGER (p. 558), and THOMAS W. MORLEY (p. 567, surrbtl). Their story is, in substance, that in the fall of 1876 they acted for the first time as triennial assessors, and that in the fall of 1879 commenced a second term in the same office. They say that upon the occasion of their first election they paid very particular attention to the duties of their office, because of complaints which had been made of prior assessments, and that they personally visited the property holders to be assessed at their places, and among the persons so visited by them was Mr. Kissinger, at the Draper farm, — this being in the latter part of November or early in December, 1876. They found Mr. Kissinger at his barn, and while talking there with him Dr. Traver went to the spring for a drink, and on returning to the party remarked upon the inconvenient distance of the spring from the house, and suggested that Mr. Kissinger should have some such device as an hydraulic ram.

Then the story proceeds, that Mr. Kissinger thereupon replied that he *had* one, but upon Mr. Dissinger's expressing a desire to see it, remarked that it was out of order and not running, which completely checked Mr. Dissinger's curiosity, AND NOT ONE OF THE PARTY PRETENDS TO HAVE SEEN THE RAM ON THAT OCCASION OR ON ANY OTHER.

This is very weak indeed, depending altogether upon recollection or supposed recollection of a casual talk said to have happened seven

or eight years ago. Mr. Kissinger's remarks may have been misconstrued at the time they were made, but more probably they have been misconstrued in undertaking to recall them seven or eight years afterwards, for the purposes of this case.

Besides, only Dr. Traver and Mr. Dissinger depose to recollecting the talk, Mr. Morley saying (q. 18, p. 570), that "as far as their being any conversation on that day, I would not like to swear positively, *I having had so many conversations on the subject of that ram.*"

The record leaves no doubt that all the witnesses had "had so many conversations on the subject of that ram," but their mental and moral constitutions were so far different from his, that *they* confidently adopted propositions talked into them as matters of their own knowledge and recollection.

Mr. Morley, when recalled by the defendants at a subsequent stage of the case (p. 152, surrejoinder), repeats in still stronger form (q. 8,) that he has no recollection of this alleged conversation, and in answer to q. 4 gives an interesting and suggestive account of the genesis of this part of the story.

Without discussing the matter further, it is sufficient to observe that such evidence as this, being simply supposed recollection of long-past talk, which, no doubt, all the parties had forgotten until brought to mind under circumstances and conditions the most likely in the world to color and pervert the recollection, cannot have the slightest weight as against the positive evidence of positive facts produced on behalf of complainants.

Defendants next undertook to show that Mr. Kissinger was at work boring wooden pipe for the ram as early as May, 1875. To this end, they examined Emanuel Keller, p. 619; his son, David Keller, p. 620; William Adams, p. 622; Peter J. Heisley, p. 626; Christian I. Heisley, p. 662; Joseph F. Heisley, p. 679; Leonard Schwartz, p. 682; and David Cowens, p. 695.

Emanuel Keller is the man from whom Mr. Kissinger procured the auger which he used to bore the pipes. This is an agreed fact in the case. He and his son (the latter evidently as a mere echo of his father) testify for the defendants in substance, that,

when Mr Kissinger came to borrow the auger, it was down at the farm of one Philip Heisley; that the Heisleys had and used the auger twice, and that it was during the *second* occasion that Mr. Kissinger came to borrow it, and the elder Keller says that *he* took the auger down from Heisley's place to Kissinger's place. Neither father nor son undertakes to specify the date. The son states (q. 9) that Mr. Kissinger kept the auger *a year or more.*

At a later stage in the case the elder Keller voluntarily appeared as a witness for complainants (p. 2382, complainants' closing testimony), and stated that it was late in the fall that Mr. Kissinger borrowed the auger, and that he was now convinced that *it was in the year* 1877.

The fact probably is that he has no real recollection as to the time. Such a circumstance as lending an auger to a neighbor is not of a kind to impress itself on the mind in such a way as to bring about any lively recollection of the time. But Mr. Keller, in cross-examination, gives very satisfactory reasons indeed for being convinced that it was in the year 1877. Mr. Keller's recollection, or fancied recollection, when he testified for defendants, that he took the auger down from Heisley's to Kissinger's, does not agree with the recollection of George W. Kissinger, who says, when recalled by complainants (p. 2409, complainants' closing proofs), that *he* went up to Keller's and fetched the auger; and his circumstantial statements that "he found it up above the wagon shed; that there were joists across, and it stuck up right across them," together with the fact that his interest in the transaction was considerably greater than that of Mr. Keller, indicate that Mr. Kissinger's is the correct account of the matter. That probability is not lessened by the consideration that it was a matter of some importance to the case which defendants sought to establish, that the auger should be transported directly from the Heisleys to Kissinger's, without an interval of time when it might have been elsewhere.

The testimony of the Kellers was followed by that of ADAMS, and that of the HEISLEYS, which is to the effect that the Heisleys had this auger of Keller's in their possession twice, for the purpose of boring wooden logs used upon their farm. That the first of these occasions

was the spring of 1874, and the second the spring of 1875. The first of these dates they were able to fix by satisfactory evidence, but the second, and the important date in this case, was altogether matter of arbitrary memory.

The material part of their testimony was that while they had this auger the *second* time, Kissinger came to inquire for it, and was referred to Mr. Keller, the owner (C. J. Heisley, int. 49). None of the Heisleys pretend to know by whom or just when the auger was taken from their place, after their second use of it.

The Heisleys are respectable people, and desired and intended to tell the truth; but, as stated, and as they themselves have admitted, in giving the spring of 1875 as the time at which they had the auger on the second occasion, they spoke from arbitrary, unassisted memory.

Inquiry on the part of complainants developed the fact that, upon the second occasion of the Heisleys using this auger, they had made by a neighboring blacksmith a reamer, for use in connection with the auger, for the purpose of reaming out the ends of the pipes after they had been bored. The books of account of the blacksmith, W. C. Patterson, show that he made, or assisted to make, this reamer for the elder Mr. Heisley, now dead, *in March*, 1876, and at the same time made sundry small repairs to the auger itself. This fact has been established by complainants by the production of PATTERSON and his books (see pages 1743–91, complainant's rejoinder).

It should be stated here that the discovery of this fact was due to one of the members of the Heisley family, CHARLES W. HEISLEY (p. 1809, rejoinder), who remembered the fact of the making of this reamer for use in connection with the auger, when that instrument was used the second time, remembered the fact that Patterson had made that reamer, and referred complainants to Patterson and his books.

The members of the Heisley family who had testified for defendants also recalled this reamer, when it was brought to their recollection by their brother Charles, and when they learned from the blacksmith Patterson and from his books the true date of the mak ing of that reamer they came forward as witnesses for complainants

to rectify the error in their testimony for defendants. Their depositions for complainants will be found as follows: —

Christian I. Heisley (p. 1791), Peter J. Heisley (p. 1801), Joseph F. Heisley (p. 1832), Philip H. Heisley (p. 1863), rejoinder.

These gentlemen all testify that their former statements in defendants' surrebuttal that the second use of the Kellar auger at their farm was in the spring of 1875 was an error into which they fell for the want of data to guide their recollections, and that the true date of that second use was the spring of 1876.

In addition to these members of the family who had testified for defendants, others who had not so testified, to wit, Mrs. Margaret Heisley, p. 1806; Charles Heisley, p. 1809; William Heisley, p. 1810, complainants' rejoinder, likewise testify to the spring of 1876.

In addition to this, Calvin J. Dick (p. 2309, complainants' rejoinder) testifies to personal knowledge of the fact that the Heisleys were boring wooden pipe on their farm in the spring of 1876, and gives perfectly satisfactory reasons for his statement as to the time.

See also, George R. Myers, p. 1866, complainant's rejoinder.

This very completely destroys the first link in defendants' chain of proof, or seeming proof, and necessarily takes with it also the second link.

This second link consisted of the testimony of Leonard Schwartz, p. 682, and David Cowens, p. 695, surrbtl. These gentlemen were neighbors of Mr. Kissinger while he lived on the Draper farm, and the substance of their testimony for defendants is that in the spring of 1875 Mr. Cowens had occasion to lay pipe from his spring to his spring house, and, in considering the question as to what sort of pipe he should use, went to Mr. Kissinger's to see him boring his wooden pipe, and, finding that he, Cowens, had no timber on his farm adapted to the making of such pipe, concluded to adopt pipe made of planks or boards nailed together.

There can be no doubt that Mr. Cowens did put wooden pipe on his place, as stated, and that it was in the spring of 1875. The whole question is as to the correctness of the association of that

event with his visit to see Mr. Kissinger boring log pipe, and the apparently logical sequence of events as testified to by Mr. Cowens, taken in connection with his undoubted respectability and veracity, gave his testimony for defendants an air of great strength. Nevertheless, it is quite obvious that if Mr. Kissinger did not have possession of the auger until some time after its second use by the Heisleys in the spring of 1876, Mr. Cowens did not, as he supposed, see Mr. Kissinger boring wooden pipe in the spring of 1875, and the case as established by defendants themselves in their surrebuttal (and that is *one* matter from which they have not since attempted to depart) is, that Mr. Kissinger did not get possession of that auger until after its second use by the Heisleys.

When Mr. Cowens testified for defendants, he was unaware of the facts proved in complainants' evidence, that the iron pipe for the ram was not made and delivered until 1878, and that Wagner did not stone up the ram pit until November of that year. These, and other truths, which might have proved disturbing influences in Mr. Cowens's reflections before he was called to the stand for defendants, were withheld from him; and the same is true as to Mr. Schwartz (see Cowens, q. 200, p. 2170, complainant's rejoinder, and x q. 102, p. 2158; Schwartz, q. 21, p. 2301, rejoinder). Mr. Schwartz (58–60, p. 2307, rejoinder) further states that before he testified for defendants he was visited by Mr. Drawbaugh and one of his counsel, *who told him that they had persons who would testify as to the time the ram was put in, and he believes the time so stated was in* 1876 *or about that time.*

In this way the recollections of Mr. Schwartz, and doubtless of many other of defendants' witnesses, were moulded. When, however, the *facts* proven in complainants' evidence were brought to the notice of Messrs. Schwartz and Cowens, together with the testimony of the Heisleys for complainants, in correction of that which they had given for defendants, those gentlemen became satisfied that they, too, had been in error, and they came to the stand for complainants to say so. Their testimony for complainants is found, that of Mr. Cowens at p. 2148, and that of Mr. Schwartz at p. 2298, complainants' rejoinder.

Mr. Cowens there testifies (q. 6–13) that *about two years after* the laying of his wooden pipe (and consequently in or about 1877) they began to give him trouble because roots had grown into them and choked them, so that the water would not run, and that he thereupon dug down and opened the pipe and removed the roots; that at or about *that* time *he considered whether he should put in bored pipe out of logs*, but did not do this, for the want of suitable timber on his place, and *that it was at this time that he went to Kissenger's and saw Kissinger boring pipe.*

During the course of a long cross-examination, Mr. Cowens was asked as to conversations which he had had with Mr. W. K. Fenn, defendants' agent at Marysville, to find and collect evidence for them, *before* he, Cowens, had testified for defendants, and among other things was asked (x q. 193, p. 2168, rejoinder) whether he had not *then* mentioned to the said Fenn this fact of having had to open his pipes to clean the roots out of them a couple of years after he first put them in, but as that work was done in the fall, while it was in the spring that he had seen Kissinger boring logs. The witness replied that he did not recollect whether he had so said or not; that he and Mr. Fenn had talked pretty often over those things.

The question itself, however, *is an admission on the part of defendants that the witness had, before he testified for defendants, mentioned this matter, of having had to take up and repair his wooden pipe a couple of years after they were laid, to their agent*, so that they cannot charge that it is matter of *after* recollection.

In connection with this, it is worth while to call attention to int. 36, put to Mr. Cowens by defendants' counsel during his examination for the defence (see p. 701, defendants' surrbtl). This question is as follows: —

"You have informed us that in the spring of 1875 you put in some wooden pipes on your farm to convey water from the spring to the milk house. *I wish to know whether you ever put in any other wooden pipes on your farm after that time, or not.*

"*A.* I never did."

This question can have had but one possible object, *i. e.*, to *seem* to exclude the idea that there was any time other than the spring of

1875 at which Mr. Cowens's visit to Mr. Kissinger to see him boring wooden pipe could have occurred; yet it now appears that Mr. Cowens had previously informed defendants' agent of the fact of his having had to take up and repair his pipes about two years after they were laid, and it seems fair to assume that this fact accounts for the other fact that the question quoted makes no specific allusion to *repairs*. Whether our interpretation of this question and its intent and motive is correct, or is, as the indignant protest of counsel (but not the one who put the question) has it (p. 2169, rejoinder), "a construction without warrant or foundation and a perversion of the record," we are content to leave to the judgment of the Court.

Mr. Cowens says (q. 15, p. 2150, rejoinder) that at the time of testifying for defendants he did not have in mind the fact of the trouble with his pipes and the repairs to them, and no doubt by that time surrounding influences and the nature of the talk which he had heard had caused the idea that it must have been when he first laid his pipe in the spring of 1875 that he saw Kissinger boring logs, to take full and exclusive possession of his mind. It is sufficient, however, for present purposes, to know from defendants' own admissions that the necessity for repairing the pipe in or about 1877 was a matter recollected by Cowens *before* he testified for defendants.

Apart from this, Mr. Schwartz testifies (p. 2301, complainants' rejoinder) that *he* has knowledge and recollection of Mr. Cowens's having trouble with roots finding their way into the pipes which he laid on his place in 1875, and that he took them up and took the roots out some time afterwards, but that this fact was not brought to his mind in a way to make an impression on it before he testified for defendants.

In defendants' *cross-examination* of Mr. Cowens (x q. 186, rejoinder) he was asked how he came to put in in 1875 pipes made out of boards. This elicited the no doubt unexpected and discomforting reply, "There was a preacher stopped at my place, and I was talking of putting in lead pipes, and he told me that *he* put in board pipe from his spring to convey the water. He said hemlock boards would last a long time and were cheap; they didn't cost much. That is what put me to putting board pipe in."

This puts a very different face upon the witness's motives in putting in board pipe, from that appearing in his testimony for defendants as moulded by the questions put to him. *There* it is made to appear that witness originally contemplated putting in log pipes such as were used by Kissinger, and substituted board pipes only because he found that the timber on his premises was not suitable for log pipe. The fact now appears that he originally contemplated using lead pipe, and adopted the board pipes instead because recommended to him as cheap and efficient, by one who had used them.

This answer, in brief, completely dissolves the imagined connection between the putting in of his board pipe and the seeing Kissinger making log pipe.

There was a strong, inherent probability in Mr. Cowens's original impression that his visit to see Kissinger boring log pipes was when he himself first put in wood pipe on his own place in 1875. There is a much stronger inherent probability that the visit was at the later period of time when his own pipe had proved defective and troublesome; but the question as to the time is conclusively determined by the evidence hereinabove referred to, showing that the auger which Mr. Kissinger used for boring his pipes did not come into his possession until some time after the spring of 1876.

It appears from the testimony of Messrs. Cowens and Schwartz for complainants, that the proof made through Jesse Wagner that the ram pit was not stoned up until November, 1878, very largely influenced them in coming to the conclusion that their testimony for the defendants was a mistake, and in this connection both Mr. Cowens and Mr. Schwartz give important testimony confirmatory of that of the Kissingers.

Mr. Cowen says (q. 3, p. 2148, rejoinder) that "Mr. Jesse Wagner was walling up the pit where the ram set in when I *first* saw it." Now Mr. Cowens was a near neighbor of Mr. Kissinger's, and the record shows that there was a frequent interchange of visits between them. The ram, of course, was an object of some curiosity in the neighborhood, and there can be no doubt that Mr. Cowens saw it immediately or shortly after it was first put in. The fact appearing from his testimony (taken in connection with that of Jesse

Wagner) that he did not see the ram until November, 1878, completely excludes the idea that the ram was there for any length of time before that.

Mr. Cowens further says (q. 14, p. 2150) that he thinks it was in the *spring* that he saw Mr. Kissinger boring at the pipes, and that Wagner walled up the pit in the *fall*. He gives this merely as an impression; but it is an impression which accords exactly with Mr. Kissinger's testimony.

Mr. Schwartz, who was another near neighbor of Kissinger's (qs. 3–7, p. 2299, rejoinder), testifies that *he* first saw the ram while butchering at Mr. Kissinger's place about the latter part of November, or may be the first of December. Cannot tell the year, but the year is fixed by his statement in answer to int. 6, that the ram pit was *walled up*, which was done by Wagner in November, 1878. In cross-examination Mr. Schwartz says that he takes Wagner's date to be correct, as he believes he is a man who keeps his accounts correctly, and he takes for granted that was the year, as he puts it, and that when he, Schwartz, testified for defendants, *he had no knowledge of Wagner's date* (x 53, 55).

Mr. Schwartz, also, in cross-examination (x q. 47), states facts showing that he must necessarily have had knowledge of the ram very shortly after it was put in, for he says that he was not only living near Mr. Kissinger, but was back and forth frequently; " while running the dairy wagon, frequently drove in for milk, and in thus going back and forth never saw the ram in operation, until that fall that he went there to butcher for Kissinger, in the latter part of November"; and he adds, as a fact within his own knowledge, *that the ram had been just put up shortly before the pit was stoned in* (x. 47).

Thus the testimony of Messrs. Cowens and Schwartz for complainants not only destroys the second link in the chain of defendants' proof by showing that Mr. Cowens's visit to Kissinger's to see the boring of log pipe was not in May, 1875, as he at first supposed, but at a period very much later, but at the same times adds to complainants' proofs matter strongly confirmatory of the statements of Mr. Kissinger and his family as to the time when the ram was put in.

Other testimony in defendants' surrebuttal, disposed of by the conclusive proof that the Keller auger did not come into Mr. Kissinger's possession until some time after the spring of 1876, is that of JOHN H. HARPER (p. 653), who testifies in substance that, having lived on a farm known as the Fenn farm, contiguous to the Draper farm, from the spring of 1875 to the spring of 1877, he had occasion in the summer of the former year to visit the Draper farm with a breed sow, and that during that errand he and Mr. Kissinger were conversing together for some time, and that Mr. Kissinger was engaged in boring wood pipes.

Harper testifies (q. 28) that, after moving away from the Fenn farm, in the spring of 1877, he was on the place again on one Sunday *in the fall of* 1877, and never after that again until three or four months before he testified. He admits, however (x. 50, 51), that while he was living on the Fenn farm, up to the spring of 1877, he frequently visited Mr. Kissinger on the Draper farm, — maybe half a dozen times a year.

That with these opportunities Harper should know nothing (save the single alleged incident to which he testifies) about the preparations, such as "digging ditches," "laying pipes," etc., which according to defendants' story were going on during 1875 and 1876, for the reception of the ram, and should not pretend to have ever seen the ram itself, makes his deposition, evidence for complainants.

JOSEPH GENSINGER (p. 767, surrbtl), who testifies that in 1875 he was tax collector of the Marysville borough, and in connection with that office visited Mr. Kissinger in July or August, 1875, and found him boring wooden pipe. It appears from Mr. Kissinger's testimony that he has been all along resident at Marysville; was engaged as a butcher there from July, 1878, until some time in 1879; was constable from 1875 to the beginning of 1877; from the latter date to July, 1878, was working around town at labor; that while he was engaged in butchering Mr. Kissinger was one of his customers; that he worked for Mr. Kissinger on the farm in 1876, and again in 1879, while as to 1877 he does not recollect.

It is quite evident from this that Mr. Gensinger's opportunity to have seen Mr. Kissinger boring the wooden pipe at *some* time was

ample, and that his testimony is simply a case of arbitrary association of disconnected events.

That Messrs. Harper and Gensinger did *not* see Mr. Kissinger boring wood pipe in 1875 is certain, for Mr. Kissinger did not have the auger which he used for that purpose in that year.

Defendants' general plan of campaign, so far as there was any (for such trifles as consistency were not allowed to stand in the way of calling a "good" witness), seems to have been to get the auger into Mr. Kissinger's hands, and have him at work boring log pipe in the spring of 1875; the further preparations, such as the digging of trenches for the pipes, and the laying of them, proceeding until the fall of 1876, and the ram put in during that fall. In pursuance of this general plan, defendants called a number of witnesses, whose testimony may be briefly referred to: —

JAMES CHAMPION, p. 594; SARAH J. CHAMPION, p. 607; and MARY MCFARLAND, p. 728.

These people tell the story that they were at Kissinger's place in July, 1876, to pick cherries, and while there noticed a quantity of log pipes lying around, which, Mr. Champion informed Mrs. Champion, were intended for the ram; but where *he* got his information from does not appear.

Mrs. CHAMPION (x 41, 42) describes these log pipes as "lying right out in the field, spread out"; and the evident absurdity of this is a sufficient reply to the whole story. Mr. Kissinger is a carpenter by trade, and knows very well that to leave log pipes exposed to summer heat and varied weather would simply be to ruin the pipes by what is called "wind cracking."

In this connection, it is well to note the testimony of Cyrus Kissinger (p. 1489, 1508, complts' proofs), that the pipes were laid while green, just to avoid such exposure and danger (see also Cowens, x 87, p. 2157, complts' rejoinder).

The Champions appear to have lived at Marysville until the spring of 1880: so that they *may* have seen log pipes on the Draper farm at *some* time.

Mrs. MARY MCFARLAND says, however, that *she* moved from Marysville in April, 1877, and has never lived there since. She says that she should judge that these assumed logs were the length of a fence rail. (Perhaps they *were* fence rails, and imagination has supplied the rest of the story.)

The attempt is also made, through Mr. and Mrs. Champion, to have Kissinger's son-in-law, Mr. Zimmerman, talk to them about an hydraulic ram at some time between the spring of 1876 and 1877. Mr. Champion (q. 48) says: "He, Zimmerman, mentioned that they *had* a conveyance." Then, probably thinking he had gone a little too far, the witness adds: "He either said they *had* a conveyance, or were *going to get* a conveyance. At *one* time he told me that they were going to get a conveyance; but this time, I *think*, he told me that they had a conveyance, to carry the water up the hill, and up to the house."

Mrs. Champion's account of Zimmerman's alleged talk is still more indefinite. She says (q. 22): "He said they had to carry it (water) up a hill, but that they *expected* . . . I cannot tell now whether they said they *intended* to get it, or whether they *had* it, and the pipes *had* bursted, and it was out of order, *or whether it was frozen, or how.*"

The fact is that Mr. and Mrs. Champion were not quite certain just what story was most suitable to the occasion; and Mrs. Champion's medley is simply a reflection of the different talk she had heard at one time and another about this hydraulic ram.

Mr. Champion, the head of the family, in 1880, figured as defendant in a criminal charge of conspiracy with others to secrete and remove tobacco, with intent to defraud his creditors (see pp. 1861–2, rejoinder). This record was obtained from the docket of the late Justice Fenn, of Marysville, which docket, since Mr. Fenn's death, has been in the custody of William K. alias "Squire" Fenn, who figures in this case as the very zealous agent for defendants, to procure just such testimony as this of the Champions.

The discovery of this adventure of Champion came about through Mr. Fenn's production of the docket for the purpose of attacking complainants' witness, William Ross (p. 1811, rejoinder).

JOSIAH M. BRUNER (p. 614) testifies that at some time between May, 1876, and the following November, he was in the live-stock business at Marysville, and kept some sheep on the Draper farm, and while there on one occasion (q. 35, p. 617) noted a hole dug in the hollow below the house, and, asking Mr. Kissinger what he was going to do, received the reply that he was *going* to put in a ram, to force the water up to the house. Mr. Kissinger showed witness some sticks of timber that he intended to use for the pipes from the spring to the ram. A leading question (q. 36) failed to induce witness to commit himself to the statement that any of these sticks were bored; but he *thinks* there was one stick lying on trestles.

The *facts*, or assumed facts, evolved in this deposition are simply "a hole in the ground," some "sticks," and one on a "trestle." The connection between these real or imagined things and the subject in hand is only the witness's supposed or pretended recollection of alleged eight-year-old talk.

To give point to his testimony, the statement is elicited from Bruner (int. 40), that he has not been on the Draper farm since the fall of 1876.

Bruner's testimony is really evidence for complainants in so far as it appears from his statements that he kept his sheep on the Draper farm during a period extending from May to November, 1876, and was on the place in the course of his business from time to time during that period, yet does not pretend to have ever seen the hydraulic ram, or to have seen any of the preparations for its reception, — such as the digging of trenches and the laying of pipe, — which other witnesses are called to testify was going on during that very period.

JOHN PEFFLEY (p. 640), a wandering shoemaker, says he lived at Marysville from some time in 1874 until the last of June or first of July, 1876, when he moved away, and did not come back again until October, 1883. Peffley says that at a time which he does not attempt to fix definitely, but intimates that it was a little while before he left Marysville, in the summer of 1876, he was on the Draper farm; on what particular errand he does not state, but

says simply (x q. 82), "I was acquainted with the boys, and we were together often." To the next question (x q. 83), asking which of the boys was with him, he replied, "I could not tell whether it was *any* of the boys, probably it was the old man; I could not tell which one was with me, or whether anybody was with me." All that he pretends to recollect is that he saw pipes lying there, and, "to the best of his knowledge," trenches *dug*, or *being* dug.

He is made to give a particular description of the direction of this trench or ditch (q. 27–29), his ability to do which is sufficiently explained by the fact developed further on (q. 41–43), that he was on the Draper farm with defendants' agent, Mr. W. K. Fenn, in October, 1883, and saw the ram there in a hole in the ground; says he went up to show Mr. Fenn where he saw the ditches and pipes in 1876. We think Mr. Fenn was the "showman." Wood pipes, witness says, were lying along the ditch at that time, and that he knew they were for a ram *because* he had *heard* people talking about it. Could not tell *when*, but it was at that time that they were working at it, "before I went West."

In cross-examination (x q. 79) he says that he had talked with Fenn about the ram *before* they went up together to the Draper farm; that Mr. Fenn was down to see him right after he came back to Marysville in October, 1883; "and asked me whether I knowed anything about it." No doubt Mr. Fenn knew his man.

WILLIAM H. MEALS (p. 800) lived at Marysville down to April, 1879 (x q. 56), close by the Draper farm, and down to that time his father was accustomed to work for Mr. Kissinger on the Draper farm.

Meals testifies (q. 12, 17, 18) that he worked for Mr. Kissinger in the latter part of the summer of 1876; helped to dig the trench between the ram and the house; did about *two hours' work* at it; worked for Mr. Kissinger again for about six days, from October, 13, 1876, and backward and forward along all fall. At that time saw that the trench that he had helped to dig was covered up, and that near the house a pipe ran up on boxes or trestles; saw water coming out of the spout above, *and by that* "THOUGHT" *that the ram*

was at work. Worked again for Mr. Kissinger in the spring of 1877, and at that time "they said" it (the ram) was *broken. Cyrus Kissinger uncovered the ram, and said that it was broken; told me that it had got frozen the winter before.*

From his cross-examination, it appears (x q. 31–43) that Meals was working for Kissinger in November, 1878; and it is the fact that at *that* time some of the pipe belonging to the ram, though not the ram itself, was frozen (George F. Kissinger, int. 6, p. 583; Cyrus Kissinger, x 274–7, p. 1487, complts' proofs).

Meals further testifies (x q. 46) that he was working for Mr. Kissinger all along during the summer of 1876. He is unable to say who helped at the job of digging the trench, or what other work *he* did that day, except, *to the best of his knowledge*, "we was hoeing cabbage, picking cabbage worms, and such like." When asked (x q. 49) who he means by "we," he replies, "I mean the man that was working with me. I will say *I*"; and then (x q. 50), "I told you I could not say whether it was Frank, Cyrus or John; *it was not Mrs. Kissinger.*

As part of the general scheme, defendants elicited from their witness, DAVID COWENS (p. 695), whose testimony has already been referred to, the statement (q. 30–44) that, in the spring of 1876, some time in the forepart of May, he went with Mr. Kissinger, at the latter's request, to Milltown. Asked (q. 44) what Mr. Kissinger went down there on that occasion for, Cowens replies, "He wanted to see Drawbaugh about this ram that he was putting in; to see whether he was soon going to put it in."

To this Mr. Cowens adds that Mr. Kissinger said to him at that time that Drawbaugh had promised to come up there and put the ram in, and it had not come, and he wanted to go down there to see when he would put it in; that he wanted it in."

Now, according to the showing of a mass of testimony taken by defendants on the subject, Mr. Kissinger's preparations for the reception of the ram were not completed before September or October, so that it is hard to understand why he should, as early as May, have been so urgent as to take a special trip to Milltown to see whether Drawbaugh was soon going to put the ram in.

The condition of affairs in May, 1876, according to defendants' own showing, completely negatives the supposition that Mr. Drawbaugh had been expected to come and put the ram in as early as May, 1876, so that Mr. Cowens's supposed recollections as to what Mr. Kissinger said are shown by defendants' own circumstantial evidence to be mistaken.

Mr. Cowens's answers to the next succeeding questions show that he speaks, not from actual recollection, but simply from present "superinduced impression."

He admits (q. 47) that he did not hear much of what passed between Mr. Kissinger and Mr. Drawbaugh on the occasion of that visit; that he (Cowens) was "round looking through the shop." He adds they were talking, and when they went to leave, Drawbaugh said that "he would try to bring it up as soon as he could; that he was busy, and had some little fixings yet to do to it."

What the "it" referred to may have been does not specifically appear, but at this point defendants' counsel resorts to one of his favorite devices for creating what *he* calls evidence, and asks the following question: —

"*Q.* 48. Did you form any *opinion* at the time as to whether Drawbaugh was very anxious to furnish the ram to Mr. Kissinger, or not?

"*A.* I did have the opinion that he did not care very much about the ram, whether he furnished it or not"; and adds "I was of opinion that Drawbaugh was fearful about his pay; I supposed he knew Kissinger as well as I did."

The records show that Mr. Kissinger was an old friend of Drawbaugh's, and had knowledge of the fact that Drawbaugh made hydraulic rams, and, furthermore, that he (Kissinger), from a very early period of his tenancy on the Draper farm, had the wish to have a ram there. Under such circumstances, it would be very natural indeed that, being in Milltown in the spring of 1876, — as to which fact there is no doubt, — and seeing his old friend Drawbaugh, he should enter into a conversation with him, and make inquiries of him regarding an hydraulic ram. From such a foundation it would be no very difficult matter for Mr. Cowens, years afterwards, with such competent aid as he could derive from de-

fendants and their agents, to evolve his supposed recollections as to the object of Mr. Kissinger's journey to Milltown and as to what occurred there.

Mr. Kissinger testifies to recollecting the visit to Milltown, but does not remember the going to Drawbaugh's shop; but he does remember that the object of the journey was *to obtain some seed potatoes.*

To this last fact Mr. Cowens himself subsequently deposed (p. 2463, complts' closing testimony), saying, "He (Kissinger) brought some seed potatoes back; *that was the object of the visit,—to get these potatoes*"; and to the same effect testifies Leonard Swartz (p. 2397, complts' closing testimony).

Assuming Mr. Cowens's recollections in his testimony in the sur-rebuttal to have some foundation in fact, that foundation is, no doubt, simply that Mr. Kissinger, being in Milltown in 1876 and meeting Mr. Kaffenberger, and having the thought of an hydraulic ram on his mind at the time, broached the subject, and made general inquiries as to the cost, etc.; and it may be at that time Drawbaugh did evince no particular anxiety to enter upon the subject.

GEORGE W. HAYES (p. 850) testifies to an alleged conversation in which Mr. Kissinger told him that he was getting on; was boring pipes at that time; and that Mr. Kissinger also stated at that or some other time (it does not exactly appear which) that he was going to fetch the ram. This, witness states, was about the middle of the summer of 1876, for which statement he gives no better reason than that it was while he was working at certain coal chutes, at which he did not work after June, 1877.

JOHN KAFFENBERGER (p. 952), a lad of nineteen, testifies that in 1876, between harvest and corn-cutting time (therefore in late summer or early fall), he met Mr. George W. Kissinger bringing home in a two-horse farm wagon the ram, which in fact was brought by Cyrus Kissinger late in October or early in November, 1878.

The witness says that he and his brother were driving down to Marysville in a spring wagon. At x q. 83, he says this spring

wagon was one which his father had bought as a buggy in the spring of 1875, and had altered it into a spring wagon.

Complainants proved by witness's father, Peter Kaffenberger (p. 2475, complts' closing proofs), that he sold the horse which he had used with this wagon in *March*, 1876, and that between two and three months afterwards he sold the wagon itself *to George W. Kissinger*, so that, at the time when witness says that he met Mr. Kissinger bringing home the ram, the wagon which he says he and his brother were driving down to Marysville on the occasion had been for several months Mr. Kissinger's property.

Kaffenberger further testifies that he saw the ram after it was in, about in October of 1876, on the occasion of going to the Draper farm for the purpose of using Kissinger's cider mill; and he tells a long story of having gone there because the cider mill, belonging to one Sitterly, which he had intended to use, was out of repair, and could not be mended because Mr. Sitterly was at the Centennial exhibition.

The Sitterlys are still living in the neighborhood, but are not called to testify about the "cider mill," and defendants' failure to create a new "issue" on that subject is only to be accounted for upon the hypothesis that the Sitterlys were not available for the purpose.

This witness, in cross-examination, betrayed such lack of memory and mental confusion that defendants devoted quite a long and helpful re-examination to patching him up, with the result of making his case a little worse than it was before (pp. 960–963).

The cross-examination shows that young Kaffenberger was on the Draper farm on various occasions down to 1883 (x q. 55–63).

JOHN W. COWENS (p. 714, surrbtl), son of David Cowens, testifies in substance that he was working at ploughing for Mr. Kissinger on the Draper farm for two days and a half in September, 1876, and while at that work saw the laying of the wooden pipe going on; that he visited the Centennial exposition at Philadelphia on the 10th of November, 1876, and on his return from that trip saw the water running out of an iron pipe very close to the house; *whence he concludes that the hydraulic ram was in at that time.*

Young Cowens also testified that he saw Mr. Zimmerman hauling

some iron pipe up to Mr. Kissinger's place from Marysville in the fall of the year 1878; a statement doubtless true, because it was then, as appears from the testimony of the Kissingers and Zimmerman, that the iron pipe was brought by the latter.

Cowens says (q. 61) that he *believed* this pipe was used to carry the water from the ram up to the house.

"*A.* 62. Because he knew they had the ram in there for that purpose."

Then comes the question: —

"*Q.* 63. If I understand your testimony correctly, they had the ram in there for that purpose as early as the fall of 1876, when you saw the water running out of the pipe up by the house: why did they want to get *new* pipe in the fall of 1878?

"*A.* Because the pipe they had in bursted."

In the next answer witness admits that he had heard no one say anything about the pipe bursting *before* he saw Zimmerman hauling those new pipes (q. 65–69), but says that Mr. Kissinger told him so *afterwards, but how long afterwards he could not say.*

Now it appears from the testimony of the Kissingers and Zimmerman that some of that iron pipe brought by Zimmerman from the railroad depot at Marysville did burst, from the effects of frost, a night or two after it was first laid, and no doubt this fact did come to the knowledge of young Cowens, as he says; but the questions put to him are moulded in such a way as to imply that it was some hypothetical pre-existing pipes which had burst, and that the pipes which Zimmerman was hauling were to replace those which had burst. Cowens does not really say and very evidently does not *know* any such thing, but the questions are so put as to give as much of that color as possible to his testimony.

Defendants' counsel was not quite content with the success of his efforts in that line during the direct examination of the witness, and so re-direct examination (q. 121) is as follows: —

"Was it during that time from December, 1879, till the first of April, 1880, that Mr. Kissinger was up at your father's house, *and told you that the new iron pipes had been used to repair the ram with?*"

The italicized portion of this question is a clear "*suggestio falsi.*" The witness, in his direct examination, had not made any such state-

ment, but had in fact simply stated that some time after (but how long after he could not tell) he had seen Zimmerman hauling the iron pipe, Mr. Kissinger had told him that the pipes had burst; and the statement that the burst pipes were some which had been in before the hauling of the new pipes by Zimmerman was simply, as sufficiently appears, a voluntary deduction of the witness himself, or rather of the examining counsel. Witness simply answers: —

"It was in the year 1878 that he was up; it was in 1878 that the pipes were put in, so it was in 1879 that he came there; it was after Christmas; he came for his corn."

The attempt, therefore, to extract from, or rather foist upon, the witness a seeming statement that the iron pipes brought by Zimmerman were to replace some previous pipes which had burst did not really succeed. Defendants have been utterly unable to show the purchase, possession or use by Mr. Kissinger of any iron pipe for the ram prior to that brought to the place in the fall of 1878 by Zimmerman. The quantity of iron pipe wanted for the distance between the ram and the point of delivery near the house was several hundred feet, and if, prior to 1878, Mr. Kissinger had anywhere obtained that quantity of pipe for the purpose, and it had been brought to his premises, and used, and subsequently discarded, defendants would have had no difficulty whatever in a village like Marysville of finding evidence of the facts. That they have found no such evidence, have been unable to do more than, as in this testimony of young Cowens, — insinuate the existence and use of some prior iron pipe, — is conclusive evidence of the falsity of the insinuation.

John Cowens's testimony for defendants was simply a matter of mistake in time; a mistake into which Cowens very naturally fell, under the influences of the common talk going on at Marysville, under the guidance of defendants' agents, for months before he was called to testify.

He lives with his father, who was Kissinger's near neighbor, during the time that the latter lived on the Draper farm. No doubt (and the fact sufficiently appears from his testimony), young Cowens was on the Draper farm time and time again during Mr. Kissinger's tenancy, so that he had abundant opportunity to see and hear, and no doubt did see and hear at some time, the things to which he

testifies. His statements are simply a striking illustration of the utter unreliability of attempt to fix the dates of matters in which a party has had no direct or personal interest, by associating them with other events with which they have no real or necessary connection.

Young Cowens, when he became advised of the *facts* proven by complainants, and not disturbed by defendants, and which show conclusively that he is mistaken in the matter of time, very properly came forward and admitted his mistake.

In his testimony for complainants (see p. 2479 of complainants' closing testimony) he says (q. 5) that while, when he testified for defendants, he was positive that it was in 1876 that he saw wooden pipes for the ram, and water running out of an iron pipe, he has since changed his mind. "Having had conversation with others about the same thing, he found that he had made a mistake."

THEOPHILUS FENN (p. 775), a brother of defendants' agent, "Squire" Fenn, lived at Marysville up to the first of January, 1879, with the exception of the time from September, 1873, to September, 1874. From April, 1876 to 1877, worked a farm belonging to his mother, or rather had it worked for him, and boarded there. (This farm, he says, was sold to a Mr. Cassell in the spring of 1878.) Saw the hydraulic ram on the Draper farm in 1876 or 1877; called at Mr. Kissinger's on some business — *does not recollect what.* Mr. Kissinger started the ram, and it seemed to work poor. Saw a gas pipe leading from the ram towards the house; when the ram was started, a very small stream of water would issue from the end of the pipe nearest the house; the stream was about the size of a "goosequill toothpick," probably a little larger. Mr. Kissinger *said* "the pipes were *old*, and had frozen and bursted, and that he would have to get others, when he expected the ram to do better service."

This is one of the feeble attempts made to supply the ram with pipe before that purchased in 1878. It is not worthy of any consideration or remark, except *that this sort of thing has been the very best which defendants have been able to do in that direction.*

The witness says he inquired of Mr. Kissinger about the cost of

putting in an hydraulic ram, for the *purpose* (he says) (x q. 41) "of putting in a ram on the farm owned by my mother, to supply the stock with water at the front farm barn."

There is something rather ludicrous in this, considering his previous description of the performance of the ram which he says he saw at Kissinger's.

The next questions and answers (q. 43, 44) develop the fact that witness says he saw the Kissinger ram in 1876 or 1877, simply because he argues with himself that *after* the year 1877 "it would not have been worth his while to inquire about the cost of the ram, *because* his mother's farm was sold in February, 1878." This sort of thing only makes apparent the fact that the witness does not actually *recollect* either the time that he saw the Kissinger ram, nor that he asked the cost of the ram, for any such reason as he gives, but simply that, in beating around for *some* plausible reason for the time which he chooses to assign for his alleged knowledge, he hits upon this.

A little further on (q. 45–49) he undertakes to assign another reason of the same kind. He says that about the middle of September, or thereabouts, 1878, a commission visited Marysville to look at proposed sites for a middle penitentiary, — a statement which is true; that *he*, with other citizens of Marysville, accompanied the commission in their tour of inspection, and accompanied them to the front part of the farm which had formerly belonged to his mother. He goes on to say that he was asked by some of the commissioners, how water was to be obtained to supply the penitentiary; and that he suggested two methods: that they could sink an artesian well, or have a never-falling supply from Fishing Creek by *hydraulic ram power* or steam. Then follows (q. 50.), "Did you, at the time of that conversation, mention or have in mind any particular hydraulic ram *which was then in use in the neighborhood?*" *A.* "Yes; my *mind* reverted to the Kissinger ram, *to the best of my knowledge and belief; but I did not mention the Kissinger ram.*"

How many streams the size of a "goosequill toothpick" did Mr. Fenn think would be required to supply the needs of the penitentiary?

But it is simply a waste of time to discuss such stuff as this. It

only remains to note that Mr Fenn (x q. 75) says that when he saw the Ki-singer ram it was cold weather, the ground had been frozen, and that the description which he gives of the state of affairs as he observed them (q. 36, 37, and x q. 68–70) shows that when he saw the ram it was before the iron pipe had been covered up, and therefore within a very few days after the ram had been put in.

Furthermore, his description tallies very closely with that given by Miss Jennie Draper (p. 1886, complts' rejoinder) of the state of affairs existing in November, 1878, when she visited the farm with her father, within a day or two after the ram had been put in.

There can be no doubt that Mr. Fenn did see the ram, but that it was in November, 1878, instead of at the time which he chooses to argue. The truth is, that one or two of the pipes froze and burst within a day or two after they were in; and no doubt Mr. Kissinger stated that fact to the witness. Witness's addition, that Mr. Kissinger stated that the pipes were *old*, is simply a case of perverted imagination, brought about by the circumstances under which his testimony was concocted.

PETER KAFFENBERGER (p. 914) lived at Marysville, or in the immediate vicinity, from July, 1872, down to 1882. His story is that he occupied a little farm in Rye Township in April, 1874, and lived there until leasing it in October, 1877; moved on to the place again in March, 1878, and lived there down to the fall of 1882. In the fall of 1875, leased to certain parties a mining privilege to dig for fireclay on the property, fireclay having been discovered during the operation of digging a well on the premises. During operations under this mining lease, the digging of the well was suspended, and not resumed until some time in the fall and winter of 1876.

Mr. Kaffenberger says that after the discovery of fireclay, curiosity brought him a number of visitors, and among them Mr. Kissinger, to whom he complained that the digging of his well had been stopped, and that it was too far to carry water from the spring, whereupon Mr. Kissinger suggested that he should get a ram, saying that *he* was going to get one, but had not fetched it yet. The witness is made to appear to say that he did not act upon Mr. Kissinger's suggestion, *because*, at a time which he gives as being in the

fall of the year 1876, he went down and saw Mr. Kissinger's ram, and it did not please him (q. 51). The water came dropping slowly into a barrel.

"*Q.* 53. Did you go and look at it, *to see whether it would suit your purposes*, or not?

"[*Objected to as leading.*]

"*A.* Yes.

"*Q.* 54. I judge from your testimony that you did not like it because it did not discharge the water fast enough, or did not discharge enough water: am I correct in that understanding?

"[*Same objection.*]

"*A.* Yes."

"*Q.* 57. *Then, after examining the water discharging from Mr. Kissinger's ram, did you go on and finish your well?*

"[*Objected to as leading.*]

"*A.* Yes."

By this style of examination, the witness is made to appear to testify that, before completing his own well, he went to Mr. Kissinger's for the express purpose of seeing the ram, and because of what he then saw went on to complete his well, instead of getting a ram.

Cross-examination (x q. 67 to 78) developed the fact that the witness's inspection of the ram was not at all matter of design, but of pure accident; that in going to and fro from his house to his work, he passed the Draper farm twice a day, *and that this continued during all the years* (save during a short period from December, 1876, to March, 1877) *down to the time* (1880) *when Mr. Kissinger moved away, and afterwards*, and that on one of these journeys he happened to see Mr. Kissinger on the road, and Mr. Kissinger invited him in to see the ram, saying "his ram was now working, and I could see it."

Mr. KAFFENBERGER says (q. 56) that the time he saw the ram was in the fall, — it had commenced getting cold already. It will be remembered that the ram was put in in *November*, 1878. No doubt the truth is that while the ram was still new (and, therefore, somewhat of a curiosity in the vicinity) Mr. Kissinger, meeting Mr. Kaffenberger under some such circumstances as the latter narrates, invited him to come and see it.

The genesis of Mr. Kaffenberger's story is simply that by dint of

talking, and being asked in private just such leading and suggestive questions as were asked during his examination, he was led, first to the conclusion that he finished his well *after* he had seen Kissinger's ram, and, then, by a very easy gradation, to the conclusion that he finished his well, *because* he had seen Kissinger's ram, — "*post hoc, propter hoc.*"

While his direct examination might be construed as an assertion that he saw the *ram*, when asked the question directly (x q. 83), he says, *I did not go down to the ram. I only saw the water dropping out of a spout into a barrel.*"

EDWARD CRIST (p. 853) testifies that he first knew about the ram on the Draper farm through the accident of going there in December, 1876, with a breed sow. Witness does not pretend to have seen the hydraulic ram, but says (q. 37), "The only knowledge I got was that I seen it running there in a barrel; that is, the water out of it." Thus, because witness sees water running out of a pipe into a barrel, he is willing to swear upon that basis to a knowledge of the ram.

It appears (q. 39, 40) that witness worked for Mr. Kissinger in May, 1877, and (q. 22) again in 1878. Cross-examined (x q. 73), he says, "I didn't do no work for Mr. Kissinger in 1878." Reminded by the next question of his twenty-second answer, he concludes to go back to first principles, and says he *did* work for Mr. Kissinger in 1878.

Crist further says (x q. 64, 65) that he went to work for the Pennsylvania Railroad Company in 1878; worked for them about a *month;* went to work again for the railroad company in the spring of 1879. Complainants show by the records of the railroad company that Crist first appears on the books of the company as working for *one day in January*, 1879; and that he did not again work for the company until *July*, 1879 (pp. 2028–9, rejoinder).

In his direct examination (q. 47) Crist positively testifies that when he was working for Mr. Kissinger in May, 1877, the ram was *working*. A leading question elicited this statement, a question put by counsel in evident forgetfulness of the fact that Meals had previously testified (q. 27) that in May, 1877, the ram was not work-

ing, but was broken, and that Cyrus Kissinger had told him that "it had got frozen the winter before." (See page 809, *supra*.)

CALVIN KEIM (p. 733) testifies that he worked for Kissinger on the Draper farm, cutting off corn, in the fall of 1876, "as near as I can tell"; never cut off corn after going to work for the railroad company in August, 1877. While at Kissinger's, at this work, in 1876, as near as he can recollect, he saw the "hydraulic ram." It was covered over with boards; *as near as he can tell* he looked down through the *cracks* of the boards. *Q.* 28, says he "did not notice any peculiar appearance about the ground around there"; but being properly led by the next question, he says he "saw a trench *being* dug up next to the house and the ground thrown up in a ridge." To the next succeeding question, says he "did not see the trench *being* dug, but saw it *dug* there."

Cross-examination develops the fact that he has been a resident of Marysville all these years, and that since entering into the employ of the railroad company he has done no work outside of that; that neither his memory nor his agricultural knowledge allowed him to say whether it was September, October or November that he cut off corn for Kissinger; that he was acquainted with the Kissinger family; was on the Draper farm the last year that Kissinger lived there; and there can be no doubt, although he will not specifically admit it, that he was on that farm from time to time down to the time or about the time that Mr. Kissinger moved away.

JOHN H. RHOADS (p. 851) "happened" to cross the Draper farm while going with one Lantz (not produced) on a fishing excursion.

They stopped at the spring, and there witness noticed the spring freshly walled up "and a tin screen in the bottom." Lantz *said* that that was pipe that they had laid for a ram to force water up to the house; saw a line of fresh ground where the pipes had been covered, or, at least, "*was said*."

Witness says the time was between the 1st and 15th of October, 1876, and he undertakes to fix that time by reference to a specific job of work which he and Lantz were engaged upon together at that time, — the sledding of wood on the Kell tract.

Defendants undertook to and did prove by the testimony of Mr. Seidel (p. 848), who was Rhoads's employer when he worked at this job, that it was going on at the time stated by the witness; but Mr. Seidel and his books also show that Rhoads was engaged upon work of the same character in 1878, 1879 and 1880, so that Rhoads's date is evidently matter of mere arbitrary selection, he having lived just where he lives now for fourteen years.

In their surrejoinder, defendants obtained from Joseph W. Rhoads, a brother of this John H. Rhoads (see p. 156, surrejoinder), testimony bearing a proper family resemblance. Joseph sees the same tin screen, and receives the same information.

There *was* a tin screen employed in connection with the ram, to keep leaves and dirt from getting into the pipes, and complainants show by the testimony and books of Mrs. ELIZA CROUSE, in whose shop that screen was made, and that of JOHN M. VINK, the workman who made the screen, that it was made on the fourth day of November, 1878 (pp. 2467 and 2480, complts' closing testimony).

Defendants, having taken a line of proof intended to show that the work of preparation for the reception of the ram was going on until September or October, 1876, and the ram itself in and at work in October or November, 1876, found no difficulty or inconsistency or impropriety in entering upon another line of proof, which, if it were true, would go to show that this ram, in the summer of 1876, had been in *and in operation long enough to be out of order.*

Examples of this are found in the testimony of STILES L. FESSLER (p. 865, surrbtl), who testifies that about the middle of August, 1876, he began butchering at Marysville and continued the business for five or six months, and during that time pastured some sheep on a field on Mr. Kissinger's place, and that, going up there on one occasion to see whether the sheep he had there on pasture were in the field or had broken out (it does not appear how he came to suspect that they might have broken out), he saw Mr. Kissinger engaged at the work of digging with a shovel, and Mr. Kissinger *told* him *that "he was trying to fix the ram.* That he thought that the pipes leaked." He says that Mr. Kissinger at the time was in his shirt

sleeves, without a vest on, from which it is to be presumed that the weather was warm.

Mr. Fessler figures on the docket of the late Justice Fenn of Marysville, the father of the squire, Wm. K. Fenn (defendants' very zealous agent to procure just such evidence as this of Fessler, and in whose possession the docket is), as having been before the justice, and bound over for trial on a charge *of embezzlement*, the prosecutor having been another of defendants' witnesses, Henry Gamber (see p. 1860 of the rejoinder). Defendants undertake to get over this by procuring and offering in evidence the *ex parte* affidavit of this Henry Gamber (p. 1862, rejoinder), in which affidavit Gamber states that he entered the prosecution in this case upon representations made to him by others, and which were not sustained upon the hearing before the justice, and that deponent was required to withdraw the said case and pay the costs of prosecution.

We presume defendants find no difficulty whatever in the fact that the statements of Mr. Gamber are distinctly contradicted by the record of the justice's docket, which states that Mr. Fessler was held in the sum of $200 for his appearance at court to answer the charges preferred against him.

It seems to be a material part of the philosophy of defendants in this case that record and documentary evidence may be readily overborne by oral testimony, provided only that there is enough of the testimony, or that it is positive enough.

It is to be presumed that when Gamber made his affidavit he was ignorant of the contents of the justice's docket, but defendants' counsel and agent, who procured and produced the affidavit, were not.

Edward L. Gault (p. 859) testifies that in the warm weather of 1876 he happened to be on the Draper farm on a search for some cattle that had broken out of a field and got away, and there came across a person who was working at the ram, unscrewing it and taking off the cap to clean it. Gault, being an accommodating person, says that he helped this man by holding a wrench to keep the pipe from turning.

Gault also testifies that some of the ground in the neighborhood was dug up, and that he saw some *old* pipe lying in there, and that

the *man said* it was *old* pipe, and had leaked where the ground was dug up.

This is another attempt, and a wretchedly weak one, to supply pipe for the ram before the pipe was bought for it in 1878, and that defendants should resort to such stuff on this point only serves to show to what desperate straits they were put.

To make the matter worse, however, Gault was asked: —

"*Q.* 37. From this conversation about the ram, did you gather *that he was the man who had furnished the ram to Mr. Kissinger*, or *not?*

"*A.* I could not positively say.

"*Q.* 38. Did you remember what your *understanding* or *opinion* was at the time upon that subject?

"*A.* No, sir."

This was a deliberate attempt to lead the witness to commit himself to a statement that Drawbaugh, who is the man "who furnished the ram," was fixing and cleaning it *in the warm weather of* 1876; IN THE MEAN WHILE DRAWBAUGH HIMSELF IS SILENT. *He* knows whether or not the ram was put in in 1876, and whether or not the iron pipe which he himself laid or helped to lay was *old* pipe or *new*, and whether or not he was ever at the place under such circumstances as described by this witness Gault. His silence can be construed in no other way than as an admission that the stories attempted to be established by such wretched instruments as this fellow Gault are lies, and that Drawbaugh knew them to be so; and his knowledge is defendants' knowledge.

WILLIAM HESS (p. 946) says that in the fall of 1876, about *the middle of September* (x q. 34), he *happened* to be on the Draper farm with *Bruner* and *Stiles Fessler*, on what appears to have been a standard errand with witnesses of this class, to wit, looking after some sheep, and that while on the farm he saw the ram, which was boxed up in the ground. He does not know whether it was running or not. So, according to Mr. Hess, the ram was in at a time when, according to the younger Cowens, the pipe for it had not yet been laid.

Mr. Hess says he fixes his time as having been in the middle of

September, because (x q. 34) he had been setting rabbit boxes and snares that day, and he never did any trapping until the middle of September.

He says (x q. 33) he was *accustomed* to set rabbit boxes and snares at that time. This habit of his supplied the witness with a suitable occasion for his alleged knowledge; the common talk in the vicinity supplied him with the year. The truth and the only truth in his deposition, is when, in answer to x q. 53 asking him what else he remembers having noticed on the Draper farm that day, he replies, "I don't remember of having seen anything else but the sheep and the ram": but he doesn't remember *that*.

The *Bruner* and the *Fessler* mentioned by Hess had both previously testified for defendants (p. 807, and p. 821, *supra*); neither of them pretends to have *actually seen* the ram; and neither makes any allusion to having been on the premises in company with the other, or to having enjoyed the delectable company there of this fellow Hess.

HENRY SHAFFER (p. 872) deposes to lending Mr. Kissinger a pair of tongs in 1877, about harvest time. Being asked how near it was to the great railroad strike about the first of July, 1877 (q. 7), witness clutches at the assistance, and says that "*it was about that time, as near as I can tell.*" Witness says Kissinger kept the tongs about half a day, and that when he borrowed them the witness asked him what he wanted with them; he replied, "to unscrew some pipe that was connected to his ram, he called it." Witness, previously, in answer to q. 9, had said that he had *no* conversation with Mr. Kissinger when he got the tongs or when he brought them back.

Witness has been car inspector at Marysville ever since 1860, and, on cross-examination, testifies that he has all along had, still has in his possession the tongs referred to.

Of course, this is another case of arbitrary selection of time to suit the emergency.

HENRY GAMBER (p. 739) says he was in the butchering business at Marysville from February, 1876, to the fall of 1877, and that, on a certain occasion, he killed a calf for Mr. Kissinger (q. 21).

He first says this was Sept. 26, 1876, and that he gives the date from a book entry. On the next day, however, he reappeared, to say that the time was Sept. 26, 1877, and that, in making his former statement, *he had been misled by his own book entry*. He says that while at the Draper farm on that errand, Mr. Kissinger took him over to the pipes, "and we looked at them, and he (Kissinger) said it was a pity the ram did not work; then we walked on down to the ram." He says the ram was in a hollow between four and five feet deep, was not covered over, and that the sides of the hollow were *planked*.

It having been conclusively shown by Wagner's testimony for the complainants that the ram pit was stoned in in November, 1878, it was, of course, highly necessary that this, and one or two other witnesses like him, who pretend to have actually *seen* the ram at an earlier period, should be very careful not to have the pit "stoned," so, according to them, it was "planked."

(*X Q.* 85.) The witness, being asked what pipes they were that Mr. Kissinger took him to look at, says they were about ten yards west of the house, or the door; they were the *lead* pipe that run up from the ram; and that he saw ten or fifteen feet of that *lead* pipe, may be. Didn't pay any particular attention to it.

It is sufficient to say that no lead pipe was, at any time, used in connection with the ram, and that even defendants have not undertaken the task of proving that there was.

Mr. Gamber is the benevolent gentleman who at a later stage of the case came to the rescue of his fellow witness, Fessler, by furnishing an affidavit, which the justice's docket shows to be untrue.

One of the features of the surrebuttal was an undertaking to prove that in the year 1877 it was proposed by the Chestnut Grove Cemetery Association, of Marysville, to put an hydraulic ram in that cemetery, and that this proposition arose out of the fact that an hydraulic ram had been put in before that on the Draper farm.

The witnesses called to establish this proposition were JOHN S. FUNK (p. 910), ELI W. WISE (p. 926), and LEWIS W. BRABSON (p. 969), all of them officially connected with this Cemetery Association. Apparently, upon direct examination, the very strongest of

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these witnesses was Wise; but it was *his* cross-examination which developed the untruth of the story.

The first called was JOHN S. FUNK (p. 910), who has lived at Marysville about nineteen years; is a member and president of the Chestnut Grove Cemetery Association; recollects that the association at one time contemplated putting in an hydraulic ram to force water from the run up to the cemetery. The reasons they did not do so were they came to the conclusion that they could not keep the boys from meddling with it; that it would be tampered with or destroyed, so they dropped the subject (q. 7). The question came up for consideration at one meeting of the association. Then the minute book is produced, containing an entry of a meeting held June 4, 1877, and among the proceedings were instructions to the superintendent to make an estimate as to probable cost of an hydraulic ram. Mr. E. W. Wise was superintendent at that time.

"*Q.* 12. At the time, was there or was there not any talk at the meeting about any hydraulic ram anywhere *in operation?*

"*A.* There was.

"*Q.* 13. What hydraulic ram was talked about?

"*A.* One that Mr. George W. Kissinger had on the Draper farm."

"*Q.* 14. According to my memory, Mr. Kissinger had spoken to several of the stockholders about having a ram. Mr. Kissinger had a ram, and he thought it would be a good thing for the association to force water up to the cemetery; that was what brought it before our meeting.

"*Q.* 15. Was it *the understanding* at that meeting that Mr. Kissinger already had a ram in at the Draper farm or not?

"[*Objected to as leading and incompetent.*]

"*A.* *It was our impression at the time. We understood such.*

"*Q.* 16. Was it the understanding at the meeting that Mr. Kissinger's ram had been recently put in, or that it had been put in some time before?

"[*Objection continued.*]

"*A.* We did not know how long it had been in. I did not hear any of the stockholders say how long."

Thus the attempt which is made, by leading questions, to strengthen the witness's testimony, had the effect of weakening it, by showing that the witness had really no recollection whatever of either himself knowing, or hearing any one, at that time, state, as a fact, that there actually was an hydraulic ram in on the Draper farm at that time.

It is shown that Mr. Kissinger had long contemplated getting an hydraulic ram, and it is highly probable that he may have recommended to the Cemetery Association to do the like; and upon that foundation it is attempted to rear the present fabric, by dint of leading and suggestive questions involving the very propositions to be established.

LEWIS V. BRABSON (p. 969) testifies on the subject somewhat more strongly (q. 27 and 28), to the effect that "Mr. Wise said we ought to have a ram to throw the water up into the cemetery; he thought it would be very handy; he then referred to the ram at Kissinger's."

"*Q.* 28. If there was any general talk at that meeting of June 4, 1877, with regard to the ram at Mr. Kissinger's place, will you state so much as you remember of the talk, or the substance of it?

"*A.* Part of the board objected at first that the ram at Kissinger's did not work well. Then it was concluded that it had not fall enough in the ground to where the ram was situated; that was the trouble; they thought if the ram was put in at the cemetery it would work all right, and that they had plenty of fall."

Neither Mr. Funk nor Mr. Wise makes any such statement as this; on the contrary, Mr. Wise is made to say that he had seen Mr. Kissinger's ram, and considered its operation satisfactory.

Cross-examined on the subject (x q. 46 to 54), Mr. Brabson is unable to say who it was that spoke of the ram at Kissinger's not working well; can name only one member of the board whom he is willing to swear took part in that discussion, and that one is E. W. Wise, who certainly, according to his own story, cannot have made any such objection; says he himself opposed the project, simply because he thought that they could get along without it. "Then Mr. Funk had something to say; suggested that they should see what the thing would cost first"; "cannot name any other member who took part in the discussion, *or what he had to say on the subject.*"

ELI W. WISE; resides at Marysville; is secretary of the Chestnut Grove Cemetery Association, and in 1877 was superintendent; is

the person instructed at the meeting of June 4, 1877, to estimate the amount of probable cost of an hydraulic ram.

"*Q.* 15. Will you tell us what caused the subject of procuring an hydraulic ram to convey water to the cemetery grounds to come up for discussion and action at that meeting?

"*A.* It was owing to an hydraulic ram having been placed on the farm of Mr. Draper to force water from his spring to his residence, or house, rather; his farm adjoined the cemetery on the west.

"*Q.* 16. At the time of that meeting of the association, what, if any, personal knowledge had you in regard to Mr. Draper's hydraulic ram?

"*A.* Having been up to see it some time prior to that, in the spring of the same year; I could not fix the date."

"*Q.* 17. I saw it; it was in operation."

"X 75. It appeared to me to work satisfactorily."

Now it would seem from this, and it was intended, no doubt, that it should seem, not only as though the proposition to put a ram in the cemetery arose out of the supposed fact that there was one on the Draper farm, but more particularly out of the fact that Mr. Wise had been to see that ram; for Mr. Brabson testifies that the suggestion came from Mr. Wise. No doubt, also, it was desired to raise the inference that Mr. Wise's visit to see the ram on the Draper farm was matter of design with reference to ascertaining the suitability of such an instrument for use at the cemetery. Mr. Wise, however, is not asked to make such a statement directly, for reasons which the cross-examination makes plain.

Cross-question 61, asked to give a little more particularly his recollection of the time at which he was up on the Draper farm to see ther am, Mr. Wise answers, "About the beginning of May, 1877."

It will be remembered that, according to the story of defendants' witness, Meals, who was examined several weeks before Mr. Wise, in May, 1877, when he was working on the Kissinger farm, the ram was broken, and Cyrus Kissinger said it had got broken, had got frozen late in the fall (see p. 809, *supra*). Mr. Wise asked (x q. 62) whether he went there for the particular purpose of seeing the ram, answers, "*Merely taking a walk and stopped there*"; that it was on a Sunday morning, and O. H. Miller was with him; *that they merely went there for the sake of the walk.*"

This, of course, is a complete negation of the supposition that Mr. Wise's alleged visit to see the ram had any reference to the project of putting one in at the cemetery, or to Mr. Wise's idea of putting one in there. The supposititious connection between the two events, however, is completely dissolved by the following: —

"*X Q.* 109. I understand you to testify that it was after, and in consequence of, this visit of yours to see the ram that you recommended the Cemetery Association to get one: is my understanding correct?

"*A.* Not necessarily so, from the fact that I knew of hydraulic rams long prior to that date.

"*X Q.* 110. I am not seeking to argue the point, but to inquire whether, as matter of fact, it was after and in consequence of your visit to the Draper farm and the examination of the ram that you recommended the Cemetery Association to get one?

"*A.* The subject was brought up at an annual meeting of the Chestnut Grove Cemetery Association after that time.

"[*Answer objected to as evasive, and question repeated.*]

"*A.* It was not in consequence of that visit.

"*X Q.* 111. I had suggested to the Cemetery Association the idea of getting the hydraulic ram for use in the cemetery *several years prior to June* 4, 1877.

"*X Q.* 112. *And I repeated the suggestion in conversation with different members from time to time up to June* 4, 1877."

This shows that the attempted association between the ram on the Draper farm and the proposition to put one in at the Chestnut Grove Cemetery is purely arbitrary, sheer invention. But the cross-examination of Mr. Wise further shows that it was not, as he says, in May, 1877, and therefore before the formal discussion, at a meeting, of the proposition to put a ram in at the cemetery, that he made his visit to the Draper farm and saw the ram there, but was, in fact, at some time after November, 1878.

"*X Q.* 92. Was the ram walled in with wood or stone or any other kind of a wall, according to your recollection?

"*A.* *I believe with stone, very ruggedly.*"

Now, it was in November, 1878, that Jesse Wagner stoned that ram pit, and defendants have been unable either to question that date or to find any one enterprising or reckless enough to stone that pit at any previous time. So much of an obstacle has Wagner's date been to defendants, that they have been compelled to imagine, or

have their witnesses imagine, a supposititious "wooden" wall there, in order to give on air of truth and probability to their stories.

This statement, then, of Mr. Wise, that when he saw the ram the pit was stoned up, is conclusive that he saw it *after November*, 1878, and this truth completely dissolves the fabric of falsity involved in this attempt to connect with the ram on the Draper farm the proposition to put one in at the cemetery.

But it was endeavored to use Mr. Wise in another way, to swear the ram on the Draper farm in, prior to 1877. He is asked what steps he took to carry out, as superintendent, the directions of the meeting with regard to an hydraulic ram at the cemetery, and testifies: —

"*Q.* 19. 'I measured the distances, and had Mr. Daniel Drawbaugh give me the cost'; Mr. Drawbaugh visited the cemetery and examined the premises with me some time in July, 1877, as near as I can recollect."

"*Q.* 22. I did not get Mr. Drawbaugh to come up from Milltown for that purpose.

"*Q.* 23. He, having some business with Geo. W. Kissinger, who lived on the Draper farm, in a financial way, called to see me, and handed me a bill against the said Kissinger, and asked me to collect it for him if possible.

"*Q.* 24. Do you remember what the bill was for?

"*A.* For constructing or putting in an hydraulic ram was what it was for. The amount of the bill was $19.80."

Witness then goes on to say that he failed to collect the bill; tried to collect it, but failed.

"*Q.* 27. Do you know what became of that bill?

"*A.* I BELIEVE I GAVE IT TO MR. DRAWBAUGH AGAIN.

"*Q.* 28. Have you searched among your papers for it the last year?

"*A.* I did. I was not able to find it."

Drawbaugh knows whether or not this bit of attempted proof that the Kissinger ram was in prior to July, 1877, is true or not. Mr. Wise places the bill which would determine the question in his hands, and Mr. Drawbaugh does not say that he hasn't it. How is this silence to be construed? Only in one way: that Drawbaugh knows the allegation involved in this piece of testimony to be untrue, and in this case his knowledge is the knowledge of defendants. It is a conclusive presumption that Drawbaugh has that bill, and that if that bill saw the light it would give the lie to this story.

The cross-examination of Mr. Wise shows conclusively that in July, 1877, when he says that Drawbaugh left this bill with him *for collection*, Drawbaugh was in Wise's debt. Drawbaugh, on or about the first of April, 1876, bought a property in Mechanicsburg from this Mr. Wise, and gave Mr. Wise three judgment notes in part payment for the property, payable respectively in one, two and three years (Wise, x q. 118–x q. 123).

Mr. Drawbaugh (see pp. 889–892, defendants' record) has testified about this transaction, and in connection with his testimony on the subject, documentary evidence was offered which shows that on the first of these notes, which was for $246.67, with interest, payable April 9, 1877, Drawbaugh paid $200 only, leaving $46.67 due, and that the judgment on this note was not fully satisfied until April 6, 1878; so that, as matter of fact, in July, 1877, when, as Mr. Wise testifies, Drawbaugh left with him *for collection* the bill against Kissinger, Drawbaugh was actually in Wise's debt for part of the amount overdue on one of these notes, saying nothing of interest. Mr. Wise was shrewd enough during the cross-examination to perceive how unlikely it was that under such circumstances Drawbaugh would have left with him a bill for collection at the time he states, and he attempts to get over the difficulty by argument, not very distinguishable from *finesse*. He says that the business of selling the property to Drawbaugh was not attended to by himself personally, but by his brother, and that he has no personal recollection of what the condition of affairs was about the payment of these several notes; and at x q. 32, says, "If Mr. Drawbaugh owed me anything at that time, he owed it on a note which was not due at that time. If you owe me a hundred dollars and give me a note, you don't owe the money until the note is due. In one sense you owe it and in another sense you don't."

But the trouble is, that, as matter of fact, Drawbaugh was at that moment owing on a note overdue, and about this feature of the case Mr. Wise claims ignorance or forgetfulness.

He admits, however (x q. 43), that when Drawbaugh left the bill with him for collection, *he intended, if he did collect it, to issue a check for the amount and send it to Drawbaugh.*

Without carrying the discussion further, it may be said, with con-

fidence, that granting, for argument's sake, that Mr. Wise, at a time when a man like Drawbaugh was in his debt, would receive a bill from him for collection with intent not to apply the amount if collected to the debt, but to transmit that amount to Drawbaugh, Drawbaugh himself would certainly not, under such circumstances, have left the bill with Mr. Wise, of all people in the world, for collection. The very pith of the story for the defence is, that Drawbaugh is a man who is, and has been perpetually, on the ragged edge of abject poverty. *Such men*, desiring to collect money for their own use and behoof, are not in the habit of utilizing their creditors as collectors.

It appears from Mr. Drawbaugh's own testimony, and from Mr. Wise's testimony (x q. 113), that the debt on the Mechanicsburg property was fully discharged in the spring of 1879, and it was *after that time*, if at any time, that Drawbaugh left the bill against Kissinger for collection.

Mr. Wise himself finally became convinced of this self-evident proposition, and that his testimony for defendants had been a grievous error, for he took the stand for complainants in their rejoinder (see p. 2330). In that deposition he says (q. 2) that his present recollection is that he was mistaken as to the time at which he had seen the ram on the Draper farm in operation; because, it having been walled, and it appearing by the record that it was walled in in November, 1878, it could not have been walled in in 1877.

"*Q.* 3. He says that his recollection still is that Mr. Drawbaugh was at Marysville and visited the cemetery with him in the summer of 1877; but (q. 4) that it could not have been at *that* time that Drawbaugh left the bill against Kissinger for collection, but at some later time, and (q. 5) he states that *while he has been living at Marysville Mr. Drawbaugh has been at his store a number of times.*"

"*Q.* 6. He says that when he testified for defendants, he did not know that Jesse Wagner had testified and had produced his book with an entry of the walling up of the ram in November, 1878."

Of course he did not. Defendants were not in the habit of exposing their witnesses to such disturbing influences.

With this falls entirely to the ground a very prettily concocted fabric, because, fortunately, it referred to events of a nature, and occurring under such circumstances, that it was possible in the nature of things to demonstrate its untruth by direct and positive evidence.

Another little group of surrebuttal testimony requiring brief consideration is that by which it was a tempted to show by the workmen, who, in August and September, 1877, built a porch and observatory for the house on the Draper farm, that the ram was in at that time. The witnesses forming this group are LEWIS W. BRABSON (p. 969), already referred to in connection with the cemetery matter; W. L. TAYLOR (p. 1042); G. W. RHOADS (p. 1048); and GEORGE CURTICE STRINE (p. 995).

Brabson and Taylor are carpenters, who, together, did the woodwork on that job, and testify that during the few days that they were at it they took their meals at Mr. Kissinger's. Brabson testifies (q. 19) that "one day when they sat down to dinner there was not water on the table, and Mr. Kissinger asked where it was, and Mrs. Kissinger said one of the girls *had just gone to the spring to fetch a bucketful of water for the table.* Mr. Kissinger seemed to be a little cross because the water was not there, and made the remark that the water that the ram forced up was not fit to use, it was so warm, and that they carried their drinking water from the spring."

He is then asked whether while at work there he went down to see the ram, and he says he did *not*, because it was no curiosity to him. "I had seen them put in when I was quite young."

He then says, however (q. 23), that while he was at work at Mr. Kissinger's, he heard *the thump* of the ram. This is pretty weak stuff at best, — a supposed recollection of eight-year-old talk, and a supposed recollection of having heard a noise, which the witness chooses to think was the thump of the ram. This is said to have been in September, 1877. It was in that very month, according to the witness, GAMBER (p. 739), that *he* was on the premises, and the ram was out of operation, *and Mr. Kissinger lamenting that it was a pity that the ram didn't work.*

It is well that it is not necessary to inquire where the truth is amidst such incongruous stuff as this, because of the conclusive nature of the proof that none of it is true.

It appears from Mr. Brabson's testimony in cross examination (see p. 979) that at different times between October, 1878, and April, 1879, he sold and delivered coal to Mr. Zimmerman, Mr. Kissinger's son-in-law, and that he personally went to the premises

with two of these loads of coal, which of them he does not remember. As the ram was in, in and after November, 1878, it *may* have been on one or other of these occasions that he heard the *thump* of the ram, and this is about the only possible charitable explanation of his testimony.

W. L. Taylor (p. 1042) does not testify with Mr. Brabson either to Mr. Kissinger's complaining of the bad habit of the ram of delivering nothing but warm water, nor to hearing the thump of the ram, but contents himself (q. 13) with the bald assertion that the ram was in and in working order, which is directly contradictory of Gamber. How he came to think that he knew this does not appear; that he does *not* know it is shown by the conclusive proof that the ram was *not* in, and in working order at that time.

Geo. W. Rhoads (p. 1048) testifies that he helped one Strine to tin the porch in the fall of 1877, and also that in the fall of 1876 he worked at Mr. Kissinger's at cutting off corn, working at that with Calvin Keim. He says that while engaged at this work of cutting off corn he got water for washing his hands and other purposes out of a barrel that stood under a pipe, and that he did the same in the fall of 1877 when working on the tinning job, and he further says that in the fall of 1876 Mr. Kissinger *told* him that the water that came through the pipe was forced up by a ram. *He never saw the ram but,* —

"*Q.* 26. Did you ever hear the ram in operation that you remember?

"[*Objected to as leading.*]

"*A.* Yes, sir."

Mr. Rhoads further testifies (q. 31) to having seen Mr. Zimmerman hauling iron pipes from the village up towards the Draper farm in 1878. It has already been pointed out that in complainants' original record (p. 555) the date of Drawbaugh's order to the station agent to deliver the pipe to Mr. Kissinger is incorrectly printed Sept. 26, 1878, the true date being Sept. 6. This sufficiently accounts for what follows in the testimony of Mr. Rhoads.

He is asked how he happened to see Mr. Zimmerman hauling those

iron pipes, and answers, "I just came out of Mr. Strine's shop, and was going up to a place near the mansion house where there were a lot of men who had come to look for a place for a penitentiary."

The date of the visit to Marysville of the commission to select a site for a middle penitentiary was Sept. 27, 1878 (see W. B. Hart, p. 1130, surrbtl). Mr. Rhoads's little story seemed to fit in with this concatenation of dates excellently well. Drawbaugh's order, as *wrongly* printed in complainants' record, was Sept. 26; so Mr. Rhoads sees Mr. Zimmerman hauling the pipe the *next* day, Sept. 27, — very natural and proper! *But unfortunately the true date of Mr. Drawbaugh's order is Sept.* 6, *and it was on Sept.* 10 *that Mr. Zimmerman came to the station, paid the freight on the pipe and took it away*, as is shown by an entry in the cash book of the station agent (see p. 2491, complts' closing proofs).

Furthermore, it appears from the records of the railroad company (for which Mr. Zimmerman, in September, 1878, was working), that on the 27th of that month *he worked full day's time.* By the same records it appears that on the 10th of that month he was *absent.* It follows that Mr. Rhoads did not see Zimmerman hauling the iron pipe on Sept. 27, 1878, and that his story is a deliberate falsehood.

Geo. Curtice Strine (p. 995) testifies in substance that he had an account against Kissinger for work done and material supplied, and among other things for the tinning of the porch in September, 1877; and that on the 19th of November, 1877, Mr. Kissinger paid him three dollars on account, as a consequence of his having made a dunning visit to Mr. Kissinger a few days before that.

According to Mr. Strine, while on this dunning visit he saw the hydraulic ram (q. 34), and he and Mr. Kissinger had conversation about it. Among other things, Mr. Kissinger *told* him that the feed pipe was made out of timber, such as round logs bored out, and that they did not work well (this is the sole charge to be found in all the case that there was any trouble with the wooden pipe); that they leaked at the connections *or* had burst; *that either Mr. Draper or Mr. Drawbaugh was to send pipes there for that purpose in place of those wooden pipes.*

There is no pretence that there was *at any time* either occasion or

proposition to replace the wooden pipes with others. Strine says he asked Mr. Kissinger *when* the ram was put in, and (q. 35) that Mr. Kissinger *told* him it was put in last fall. Said he, "It has been in since last fall. He also told me who put it in there."

Then (q. 36) witness proceeds to tell very much the same story about the iron pipe that a few moments before he had about the wooden pipe. He says, "Kissinger told me the iron pipe was out of order; that at first, when it was put in, it was *second-hand* pipe, and that the joints did not fit well."

Now, if it were a fact that the iron pipe first put in with the ram were second-hand pipe, Drawbaugh knows it. Why doesn't he take the stand and say so? If it be true, he no doubt knows where the second-hand pipe came from. How is it that the source of that second-hand pipe has not been developed? If Mr. Kissinger had had in use, in connection with the ram, several hundred feet of second-hand pipe, how is it that defendants have not been able either to show where it came from or what became of it? The story is simply a lie; Drawbaugh knows it to be so, the defendants know it to be so, and they devolve the task of insinuating this falsehood upon such instruments as Strine.

To give further point to his story, Mr. Strine is led to testify (q. 40) that, at Mr. Morley's store in Marysville, on an evening after these supposed occurrences, he heard Mr. Kissinger complaining about some pipes that he was expecting to have sent there by rail that did not come at the time they should have.

Mr. Strine's whole story, so far as the matter of time is concerned, rests upon the assumption that he never, after November, 1877, visited Mr. Kissinger to try to get money. He says he did frequently apply to Mr. Kissinger, but that it was when he would happen to meet him in Marysville; and that he does not REMEMBER of calling at his house to see him but the one time.

The cross-examination shows that Mr. Strine has a remarkably bad memory for everything but the story he is called to tell. His answers to x q. 49, 50, 52, 53, 56, 59, 60, 61, 62, 63, 64, 73, 76, 78, are all statements that he "does not remember," "can't recollect" this, that and the other thing, — which he certainly should have been able to recollect fully as well as the story of his

examination in chief, since the questions which elicited these answers refer very largely to matters of immediate interest to himself.

When asked (x q. 83) when, according to his recollection, he was last on the Draper farm, he replies, "In the year 1879, I *guess*. I was on the mountain part gathering roots, such as sassafras, tearoot and small chestnut-trees."

Asked whether that was before or after he went to Mr. Kissinger's place to attend a sale, he says "after."

In point of fact, Kissinger's sale was in 1880; so that when he *does* remember, he remembers wrongly.

It only remains to make brief mention of two or three scattering depositions in the surrebuttal.

Mr. and Mrs. DAVID WEBB (pp. 708–10). — These witnesses simply depose to the undisputed fact that, in the spring of 1875, David Cowens laid wood pipe upon his premises. Webb was at that time, and down to November, 1875, living on Cowens's farm; he was down at the Draper farm once or twice in the winter; and says, that while he lived on Cowens's place, he remembers nothing of Mr. Kissinger's getting an hydraulic ram, or boring any wood pipes, — a pretty sure indication that at that time there was not even so much as talk going on, on the subject.

JOHN K. KEIM (p. 893) worked for a Mr. Crossley, on the Fenn farm at Marysville, from April, 1877, to April, 1878. While living there, helped to thresh and put out seeding for Mr. Kissinger on the Draper farm. While so working got his meals at Mr. Kissinger's. The family got their water at the spring, and (q. 9), to the best of witness's knowledge, *it was carried in buckets*; (q. 10) heard them say it was brought in pipes at *some time;* saw a pipe that came up from the ground, close by the house, that witness *reckoned* was for that purpose, — a round pipe, something like an elbow; don't know just what material; what all pipes are made of, he *guesses* (q. 17); at our meals, the women were saying it was out of fix.

"*Q.* 18. That what was out of fix?

"*A.* To the best of my knowledge, the pipe that was to carry the water to the house."

"*Q.* 20. Was not informed at that time by what means the water was led, or caused to flow, or forced through the pipes, that I recollect of."

The only piece of competent evidence in all this is the witness's statement that, in the year 1877, the family were bringing water up from the spring in buckets; and this is evidence for complainants.

Furthermore, it seems that witness, working on the place in 1877, as he says, neither saw any hydraulic ram nor had any kind of knowledge of any; and *that* is evidence for complainants.

WILLIAM W. SNYDER (p. 1066).—This man's testimony has been considered in complainants' main brief (p. 686). He was called for the express purpose of contradicting a specific statement of complainants' witness, James F. Zimmerman, and the result of his examination was to completely vindicate Mr. Zimmerman, and place Snyder himself in a most unenviable position.

STEPHEN H. MORLEY (p. 1120) saw the hydraulic ram on the Draper farm; does not remember whether it was 1876 or 1877; about October, some time; never saw it after that. Founds his selection of time upon the queer reason that, before April, 1878, he was living in one house in Marysville, and since April, 1878, has been living in another house; and thinks it was while living in the first house that he went to see the ram.

This deposition formed a fitting close to defendants' surrebutting proofs, which consist simply of an endeavor to overcome the irresistible logic of facts by a mass of oral testimony setting forth what purport to be the "independent" recollections of casual witnesses.

No one who had anything to do with the hydraulic ram, or who had any real substantial reasons for recollecting the time, was called; the man Drawbaugh, who should know the whole truth about the matter, was not called, and we have the right to suppose that he was not called *because* he did know the truth.

The closing of the rebutting proofs left the case precisely where it was before they were opened, so far as regards the weight of evidence proceeding from the persons who *ought to know, and from contemporaneous documentary evidence.*

The bills produced by complainants, showing the purchase and arrival at Marysville of iron pipe for the ram, and that these events occurred in the summer and fall of 1878, are CONCLUSIVE as to the time at which the ram went in, unless the defendants could show the pur-

chase, arrival, use and discarding of some previous pipe, by positive evidence worthy the name. This they were not able even to *try* to do, and complainants' documentary evidence remains unanswered.

The only result, therefore, of defendants' surrebuttal has been to show that where a party is disposed to take such a course, he can collect almost any amount that he may like of oral testimony to an absolute untruth. Had Kissinger obtained, in 1875 or 1876, several hundred feet of iron pipe, or pipe of any other material, used it for two years or so, and at the end of that time discarded it and substituted other pipe, the defendants would have had no difficulty whatever, at such a place as Marysville, in finding satisfactory evidence of these facts, yet all they have been able to do in this direction is to obtain from three of their witnesses lying or mistaken statements to the effect that at such and such times prior to 1878 Kissinger alluded to some apocryphal pipe as being *old*. Drawbaugh of course knows, and, he knowing, defendants know, that the iron pipe of 1878 was for the ram, and that it was the *first* pipe used for the ram. Drawbaugh's silence is an admission on the part of himself and his associates, the defendants, of such knowledge, yet they deliberately go to work and procure and produce a mass of testimony, the falsity of which, and their knowledge of its falsity, are completely demonstrated by this documentary evidence as to the pipes, and the failure to answer it.

It is especially to be noted in connection with the whole plan of the surrebuttal, that it involves the acceptance by the defendants of the test adopted by complainants, in their proofs, of the accuracy or inaccuracy of the witness Draper's deposition, as to the all-important question of *time*. The material time involved, of course, is that of the visit of Draper and Kissinger to Drawbaugh's shop; but this was a purely personal transaction, leaving no permanent traces behind it, and necessarily rests upon the recollection of the parties concerned, to wit, Draper, Kissinger and Drawbaugh. Draper says one thing, Kissinger says another; the third party, Drawbaugh, *is silent*. His interest would not have allowed him to remain so had he known or even thought, or been willing to run the risk of swearing that he knew or thought, that

Draper was right and Kissinger wrong. But Draper's seemingly very positive impression that the interval of time between the ordering of the ram and the putting it in was not more than one season, if so long, made the time of the putting in of the ram a question of decisive materiality; and when the complainants' proofs showed that that event happened in the fall of 1878 instead of the spring or summer of 1875, as Mr. Draper thought or affected to think, his testimony was very conclusively disposed of.

The surrebuttal was a tacit admission of this. It treats the question of the time of the putting in of the ram as a *decisive* question, and undertakes to vindicate Mr. Draper by showing that the ram was in at a period very much earlier than that stated by Mr. Kissinger and the members of his family.

It did not at *this stage* of the case, as at a later stage, occur to the defendants to have their witness Draper admit that he was mistaken as to two thirds of his testimony, and insist that, as to the remaining third, he was right. Mr. Draper was not recalled in the surrebuttal to modify his former testimony in a single particular, as of course he would have been if the defendants had thought that their surrebuttal testimony involved any serious departure from any of his original propositions. It was reserved for a still later — the very last — stage of the case, when the fabric erected in the surrebuttal had been completely overthrown by complainants' rejoinder to bring Mr. Draper upon the scene again to say that, of all his prior testimony, that fraction only which happens to be useful to defendants, is right.

In their rejoinder, the complainants, besides calling those of defendants' surrebuttal witnesses, who, having innocently fallen into error, were honest enough to come forward and say so (and whose testimony for complainants has been considered in connection with that which they gave for defendants in surrebuttal), called quite a number of other witnesses, to whose testimony reference may be made: —

Rev. G. E. Zehner, 1838; Rev. J. J. Kerr, 1872, rejoinder, both testify that during the year 1878, prior to November, they had occasion to visit Mr. Kissinger at his house, and neither of them saw

any hydraulic ram nor any signs of such a device, but did hear Mr. Kissinger speak of the difficulty of getting water from the spring, and express his expectation of getting over the difficulty by means of an hydraulic ram.

Mr. Kerr, in cross-examination, testifies (x q. 55) that on the occasion of one of his visits to Mr. Kissinger, *that gentleman came in and apologized, stating that he was at work getting ready for the hydraulic ram.* That, Mr. Kerr says, was at one of his later visits, *either the last or the next to the last, about the beginning of* OCTOBER, 1878.

Mrs. THOMAS DRAPER (p. 1880), wife of defendants' witness, Thomas Draper. This lady testifies that she visited the farm at Marysville with her husband in November, 1877, and fixes that time beyond question (q. 4–7).

Never visited the farm at any other time while Mr. Kissinger lived there. Stayed there four or five days; *family brought their water in buckets from the old spring house;* DON'T THINK THERE WAS ANY RAM.

"*X Q.* 33. During that visit did Mr. Draper drive away anywhere with Mr. Kissinger?

"*A.* I think he did."

As it was at this visit that Mr. Kissinger says he and Draper went to Drawbaugh's to order the ram, defendants thought it indiscreet to push the inquiry further at that time.

Miss VIRGINIA M. E. DRAPER (p. 1886), daughter of Thomas Draper, visited the farm at Marysville with her father *in November*, 1878. The date is fixed by documentary evidence (see p. 1887). Witness was never at the farm at any other time during Mr. Kissinger's occupancy of it. During that visit there was an hydraulic ram on the place. The work did not look to witness to be complete. The pipe was not in the ground. The end of it was propped up on pieces of board, and no upright piece was on to throw the water out.

Q. 12. Witness was in the yard with one of the girls, and Mr Kissinger drew her attention to the ram, and showed her how the water came up, "*and I remember asking if they had been bringing water up the hill all this long time, and he said they had.*"

did not want to see her. Witness said he did; went into the house, saw the young lady and had a conversation with her. Never saw Miss Draper at Mr. Kissinger's at any other time; this was the only time she was up, to witness's knowledge (q. 33, 34).

(Miss Jennie Draper testifies that she was with her father visiting the Marysville farm in November, 1878; and that that was the only time she was there during Mr. Kissinger's tenancy.)

The description given by Mr. Foulk of the condition of affairs about the ram, tallies exactly with Miss Draper's recollections on the same subject.

The testimony of Mr. Draper's wife and daughter, and of his agent, Mr. Foulk, forms in itself a complete chain of proof that the hydraulic ram was not on the farm in November, 1877, and had been just put in in the early part of November, 1878; while the statement of Mr. Foulk as to what Mr. Draper said in the fall of 1877, when the objections of Mr. Foulk's son-in-law to renting the place were made known to him, shows pretty conclusively that at that time the ram had not been ordered.

Mr. Draper was subsequently put upon the stand by defendants, and did not undertake to contradict or to modify in the least particular any of the specific statements made by these witnesses.

HERMAN J. EPPLER (p. 2175, rejoinder). — This witness is one of great importance, not only from the nature of the testimony which he gives, but even more from that of the documentary evidence which he produces, and which defendants have neither questioned nor explained.

It was incidentally shown, during the course of the cross-examination of Mr. Eppler, that this documentary evidence had been inspected, and copies of it taken by one of defendants' counsel, several months prior to the commencement of the taking of defendants' surrebuttal testimony. That with this knowledge defendants did not call Mr. Eppler is easily understood; but it is very hard to understand how, with that knowledge, they could bring themselves to undertake to establish such a story as the surrebuttal was designed to prove.

Mr. Eppler's testimony, in substance, is that he lived at Marysville from 1862 to 1882, March (q. 23), and from the 8th of

March, 1877, to about the latter part of January, 1882, acted Draper's agent at Marysville, to take care of his property there.

The letter and the power of attorney making Mr. Eppler agent are produced, and printed copies of them appear on p. 2176, rejoinder. There had been a verbal agreement between Messrs. Draper and Eppler as to this agency about a month or six weeks before the date of these papers, that verbal agreement having been come to at Marysville, at Mr. Eppler's shoe store.

(Q. 12.) Witness saw a ram on the Draper farm in 1878. (Q. 13.) When witness was appointed agentin March, 1877, there was no ram there. The ram was put in (q. 14) *the second year that witness acted as Mr. Draper's agent.* Witness produces (q. 15, 16) two documents, one a letter written and signed by Mr. Draper, and addressed to Mr. Eppler, and dated Dec. 18, 1877; the other, an agreement dated Dec. 4, 1877, and executed by Thomas Draper and George W. Kissinger, the agreement being for a lease of the Draper farm at Marysville to Mr. Kissinger, on shares. Printed copies of these documents appear on pp. 2178 and 2179 of the surrejoinder, and no question is made as to the authenticity of either document. The letter is of such importance that we deem it well to give here a full copy of it.

MAGNOLIA, Dec. 18, 1877.

MR. HERMAN EPPLER:

Dear Sir, — Inclosed I return the Agreement for Kissinger with the stock claus intirely left out. The understanding between him and me was, that I was to find one-half the corn to feed them. My only object was to feed the grain on the farm, so as to improve it. But if Kissinger don't like that, all right with me; and if he won't sign this agreement, he can stay under the old agreement and pay a certain Rint; and if he don't like that, I think the Farm can be Rented to Esqr. Foulk's son in law, Mr. Wallace. *Kissinger could pay all his rents in improvements if he would. The Ram to throw up the water he was to put in; and the Barn wants repairing.* There needs a back Poarch & smoke house And Privy. He could haul the stone, do the carpenter work, and change around so as to have but little money to pay; but I must have my rents in some way. I can't aford to keep the property and get nothing for it. I think I am as easy satisfied as anybody could be, but must have my rents somehow. Write to me at once and let me here what he does.

The calculation is now that my vessel will go to Philadelphia next

trip. If she does you may look for the Oysters about the middle of next week.

We are all well as usual.

Ever Truly THOMAS DRAPER.

The words which we have italicized, read in their place in the letter, speak for themselves. Mr. Draper *could* not have so written on Dec. 18, 1877, if at and before that time there was an hydraulic ram on the premises. This paragraph in one of his own letters completely destroys his own story.

The lease agreement referred to, and which is in evidence as "Draper-Kissinger lease on shares, December 4th, 1877," provides that from and after the first day of April, 1878, Kissinger is to pay rent in a share of the produce of the farm. Previously, Kissinger had been under a money rental.

Mr. Eppler testifies that Mr. Draper was at his Marysville farm in the early part of 1877, before sending the power of attorney to Eppler, and (q. 41) that *he was there again in November*, 1877; and he fixes the time of this last visit by reference to a charge on his book dated Nov. 12, 1877, for a pair of shoes sold to Mrs. Draper at that time, a fact to which Mrs. Draper herself testifies (p. 1881, q. 8, 9.

The fact that Mr. Draper visited his Marysville farm in November, 1877 (proved not only by Mr. Eppler, but by Mrs. Draper), and the subsequent making of a new lease agreement between Draper and Kissinger in December, 1877, indicate how possibly Mr. Draper may have fallen into error in his original testimony as to the date of the visit to Drawbaugh's shop. Reference to that testimony shows that he connected the visit with the leasing of the property by Mr. Kissinger, and that he associated the occurrence with the *original* lease in April, 1874. The visit to Drawbaugh's shop being associated in Mr. Draper's mind with the matter of a lease to Kissinger, it would not have been a very unnatural mistake to associate that with the first lease made in 1874, which was in fact connected with the second lease in the fall of 1877.

The visit to Drawbaugh's shop, whenever it was, was while Mr. Draper was visiting his Marysville farm. That he visited the

farm in the fall of 1877 is a fact established beyond a doubt, but that he visited that farm at any time during the year 1874 is a matter which rests entirely upon his own say so, while Kissinger testifies that he cannot find a trace of Draper's having been there in that year. Furthermore, when it comes to consider Mr. Draper's testimony in surrejoinder at length, it will appear that he gives no satisfactory reason whatever for the allegation that he was there in 1874. It does not appear to be with him a matter of actual memory, but purely of argumentative inference.

The record shows not only that Draper was at his farm in November, 1877, but that during that visit he and Kissinger were negotiating, and immediately thereafter effected, a new lease agreement. This presents a charitable explanation of Draper's *original* error.

Mr. Epp'er also testifies to the visit of Mr. Draper in the fall of 1878, and says that it was during that visit that he (Eppler) first saw the ram; that it had been in then but a short time. Witness was not up there while they were actually at work setting the ram. Mr. Kissinger had told him that they were putting it in, and wanted him to come up and see them working at it, but witness could not go, because it was election day, and he wanted to go to the election, and try and collect some money from parties whom he was likely to meet at that time (q. 28–32).

The fact of Mr. Draper's visit in November, 1878, is further established by the production of three promissory notes, payable to Draper's order, signed by Kissinger and witnessed by Mr. Eppler, and which notes, Mr. Eppler states, were filled out by Draper and signed by Kissinger and himself at his store at Marysville (q. 33–38).

Another important piece of testimony given by Mr. Eppler is that while out gunning, in the latter part of 1877, along towards the close of the holidays, as near as he can get at it, in December (with his brother, Simon G. Eppler), on the way they came through some young chestnut timber belonging to Mr. Draper; found that some trees were cut; that he thereupon, as Draper's agent, went down to see Mr. Kissinger and inquire who cut those trees. Found Mr. Kissinger at the barn, and Mr. Kissinger said that he cut them for pipes or spouting for the ram; something to that effect (q. 20–27). About

two weeks after that witness saw some of these timbers on Mr. Kissinger's place; one or more of them was bored, and the auger was in one q. 23).

Still another important statement by Mr. Eppler is, that on one occasion Mr. Draper and Mr. Kissinger stopped at his shoe shop, at Marysville, and told him that they were going over to order a ram to throw water up to the house, *and that this was while witness was acting as agent for Mr. Draper* (*therefore, after March* 8, 1877).

Mr. Draper, witness says, was not in the habit of visiting his store before that time. Witness began to keep the store Jan. 11, 1876 (q. 44–49); so that the incident could not possibly have happened before *that* date.

Defendants paid the tribute to witness's importance, of subjecting him to an extraordinarily long cross-examination, lasting an entire week, and covering about one hundred pages of the printed record. The general object of the cross-examination, apart from the attacks insinuated, rather than directly made, upon his good faith, seems to have been to show that witness had, at a former time, made to defendants' counsel statements inconsistent with those of his direct examination, regarding the time at which he began to act as Mr. Draper's agent, and regarding the time that the ram was put in; and that, in the mean while, he had forgotten having made such statements.

This might be of some importance were Mr. Eppler's testimony mere matter of arbitrary memory, but, as it happens, Mr. Eppler's dates — the important element which gives vitality to his testimony — are fixed by documentary evidence which the defendants have not ventured to assail; to show that at some time, when Mr. Eppler had not these papers by him to refer to, he made statements as to dates which the papers, when referred to, show to have been incorrect, is simply to illustrate the fallibility of the human memory, especially on the subject of time, when it is left to its own devices, and has no artificial aids; and a demonstration of this kind is the last thing which the defendants can afford.

Counsel was armed, for the purpose of this cross-examination, with two written statements, which, it seems, *he* had procured from Mr.

Eppler in June, 1883, during a visit which he paid to Mr. Eppler at his place in Baltimore. These statements are in evidence as "Exhibit Eppler-Hill Statement," and "Exhibit Eppler-Hill Statement No. 2"; they bear the same date (June 27), and appear to have been made during the same visit. They are not in the handwriting of the witness, save as to the signature, but in that of the counsel; and the record shows that they were obtained from the witness during the absence of the documentary evidence which would have guided his recollections, and at a time when he was greatly troubled in mind, and physically exhausted, owing to the long-continued sickness of his wife, who died in the following month (x 505).

The making of these written statements seems to have slipped the witness's memory, — a fact quite sufficiently accounted for by the circumstances under which, and the manner in which, they were prepared. Counsel thought it proper and decent to keep these statements in his pocket until after he had cross-examined the witness, as to their contents, for one or two days, and could produce them with what seemed to him the best dramatic effect.

In the first of these written statements, Mr. Eppler is made to say that, "in the written agreement between Thomas Draper and George W. Kissinger, dated not later than April 1, 1877, *as I remember it*, there was a clause to the effect that said Kissinger was to keep the ram in repair." In point of fact, the agreement is dated Dec. 4, 1877, and there is not a syllable in it about the ram, though there is a general provision that Kissinger shall keep the farm and its belongings in good order and repair.

In the second written statement, which seems to have been an addendum, brought about by conversation subsequent to the writing of the first, Eppler is made to say that "the agreement was dated, 'I think,' either in January or April, 1877; and contained a reference to an hydraulic ram; one of the letters referred to the hydraulic ram, and the others *may have* contained references to said ram, but I do not remember whether they did or not. I think the letter referring to the ram was dated some time in 1877."

Mr. Eppler's recollection that one of the letters referred to a ram, and that that letter was dated some time in 1877, was quite correct. The Draper-Eppler letter — the only one referring to the

ram — is dated Dec. 18, 1877; so that the only real mistakes involved in these written statements are as to the date of the Draper-Kissinger lease agreement, and as to its containing a reference to an hydraulic ram, — mistakes not at all extraordinary, when the witness was called upon during a brief and casual interview to recollect the relative dates and respective characteristics of a number of absent papers, made at different times.

That, under the circumstances appearing on the face of the cross-examination, Mr. Eppler, in hurriedly recalling, or trying to recall, several transactions and their respective dates, should have confounded the date of his own appointment as agent with that of the new lease agreement between Draper and Kissinger, and should have imagined a reference to the ram in one document rather than in another, is a matter little to be wondered at.

That Mr. Eppler desired to put defendants' counsel in possession of the *truth* is evinced by two things. Counsel paid Mr. Eppler two visits, a week or two apart, and it was at the last of these two visits that these written statements were made. At the first visit, Mr. Eppler had told him that the documents were in the possession of complainants' counsel, and, at the request of defendants' counsel, Mr. Eppler at once wrote to complainants' counsel, asking for the return of the papers, and stating *that he would like to have them to show to the opposite party about the ram* (p. 2285, rejoinder). Complainants' counsel did not think it necessary or proper to place important documentary evidence at the mercy of the "opposite party," and did not return the papers. Thereupon, when defendants' counsel visited Mr. Eppler for the second time, he asked for, and Mr. Eppler at once gave, a written order upon complainants' counsel to allow defendants' counsel to see and take copies of the papers. This order is in evidence (p. 2217, rejoinder).

This conclusively shows that Mr. Eppler's intentions were of the best; that he was disposed to do all in his power to give defendants an opportunity of getting at the *facts*. Indeed, the only creditable features connected with these Baltimore interviews, and their outcome, are those connected with Mr. Eppler's conduct.

It further appears (p. 2287, rejoinder) that defendants' counsel, armed with this order, visited counsel for complainants, and was at once allowed to inspect and take copies of all the papers which had been delivered to complainants' counsel by Mr. Eppler; and this shows that defendants were not misled by anything which Mr. Eppler had told them, but proceeded with the concoction of their surrebuttal evidence with their eyes open to the facts apparent on the face of that documentary evidence. Of course, an examination of these papers showed defendants that Mr. Eppler could not be used in support of their little story, and they did not call him.

Assuming, for argument's sake, that the Eppler-Hill written statements are exact reflections of what Mr. Eppler said at the time, — an assumption which by no means necessarily follows from the circumstances attending their concoction, and which Mr. Eppler himself denies, — they are simply a striking illustration of the untrustworthiness of what defendants are so fond of harping upon, "independent recollection," especially about the matter of time; and if it had been defendants' object to furnish a lively illustration of the general worthlessness of just that kind of testimony upon which their case is wholly built, they could not have done so more effectually than was done by this long cross-examination of Mr. Eppler.

There is nothing, however, in the witness's statements contradictory of the material *facts* testified to by Mr. Eppler, to wit, that he saw the ram shortly after it was put in; that *at some time after he had become Mr. Draper's agent*, and therefore after March, 1877, Mr. Draper and Mr. Kissinger stopped at his place, and stated that they were going over to order the ram, and that in the latter part of the year 1877 he saw on the Draper farm, logs which Mr. Kissinger told him he was going to use for making wooden pipe, and subsequently saw such pipe.

The documentary evidence produced in connection with Mr. Eppler's testimony fixes beyond question *the range of time* within which these events must have occurred. Every one of them must have happened subsequently to the 8th of March, 1877, for it was not until then that Mr. Eppler became Mr. Draper's agent.

The time at which the ram was actually put in is so abundantly fixed by the testimony of Draper's own daughter, and his agent, Mr.

Foulk, and his own admissions, that it is not necessary to discuss that matter further.

The only possible question that can be made is as to the correctness of Mr. Eppler's statements with reference to the incident of Mr. Draper and Mr. Kissinger stopping at his place on their way to Drawbaugh's shop, — *and this, Mr. Draper, when afterwards on the stand, was not asked to specifically deny*, while Mr. Kissinger has confirmed it (q. 51, p. 2409, complts' closing proofs), — and as to the other incident, of Eppler and his brother seeing the logs which had been cut for pipes, and this statement is in harmony with the weight of evidence on that subject.

But the most material feature contained in Mr. Eppler's deposition, one which does not allow of any question, either of veracity or memory, is the Draper-Eppler letter of Dec. 18, 1877, the terms of which are utterly inconsistent with the existence of a ram on the Draper farm at that time. This letter Mr. Draper has neither denied nor attempted to explain.

Simon G. Eppler (p. 2325, rejoinder); resides in Marysville, and keeps a shoe store there. Is a brother of Herman J. Eppler, whose testimony as to being on the Draper farm in the cool weather of the fall of 1877, and seeing some trees which had been cut down, lying in the woods at that time, and the visit to Mr. Kissinger to discover what this meant, he confirms.

Abram C. Dissinger (p. 2345, rejoinder). — This gentleman is one of the three who were triennial assessors at Marysville in the fall of 1876, and again in that of 1879, and who testified for defendants in surrebuttal.

Mr. Dissinger comes forward to say (q. 2), "after thinking some about the dates, I have been somewhat in doubt for fear I may have got 1876 for 1879. My first impression was, of course, that it was 1876, but I would not say now positively that it was, on account of assessing two terms. I may have been in error as to dates. Have never seen the ram on the Draper farm" (q. 3).

With the closing of complainants' rejoinder, the true date of the putting in of the ram was so overwhelmingly established that the de-

fendants themselves appreciated the necessity of shifting ground, if Draper's original deposition for them was to be saved. But they were very loath to give up the story that this hydraulic ram was in, and in operation in the year 1876, although they knew that Mr. Draper himself had ceased to be of that belief, assuming it ever to have been his belief; and it is one of the singular features of this case, that, while one of the defendants' counsel was taking, at Dover, Del., Mr. Draper's deposition in surrejoinder, in the course of which deposition he admits that he was satisfied the ram was not put in until 1877 or 1878, another of defendants' counsel was taking, at Harrisburg, Pa., a couple of lying depositions to the effect that the ram was in and at work in the year 1876.

The new story which Mr. Draper was called upon to give in surrejoinder, and the evidence designed to sustain it may, with that which complainants, in their closing proofs, took in reply, best be considered apart from that surrejoinder testimony, which is simply cumulative of the surrebuttal. We will, therefore, before passing to a consideration of Mr. Draper's new story, dispose of this cumulative testimony, designed to support the old story, together with such parts of complainants' closing proofs as are in direct reply to this cumulative evidence.

The depositions in the SURREJOINDER intended to establish the story that the ram was in and in operation, during and after the year 1876, are as follows: —

SAMUEL TRAFFORD (p. 72) worked for Seidell Brothers at Marysville from 1872 to 1878; while working there was on the Draper farm and saw an hydraulic ram there. Is not sure that it was in 1876, but is quite sure that it was in 1877. Was employed by the Seidells at the time; could not tell how often he saw it, 10, 15 or 20; perhaps 20 times; saw it in position and saw it operating and saw it when it stood and would not work. Got around on the Draper place on different occasions, — sometimes gunning and sometimes for fruit. Last Thursday was the first time witness had been on the Draper farm since he left the employ of Seidell Brothers. Have never seen the ram until last Thursday, since 1877. When I saw it last Thursday, looked into the well hole, in which the ram stands. Can't recollect of there being a wall around the ram when I saw it

in 1877; think it was a kind of box; there is a wall around it now.

Another tribute, this, to the irresistible force of Wagner's testimony. It does not add to the value of this deposition, that witness had been taken to see the place and the ram, a few days before he testified.

FRANCIS A. GIVEN (p. 116) testifies that he was telegraph operator for the Pennsylvania Railroad Company, and lived at Marysville for two years from November or December, 1875, and moved away from Marysville about the 3d or 4th of December, 1877, and went to Philadelpha; has knowledge of a ram on the Draper farm, near Marysville; was in company with Geo. Kreidler, taking a walk; walked in the direction of the Kissinger place, and in our walk we saw this hydraulic ram; would not be positive as to the date, but think it was in 1876. The ram was not far from the house.

Q. 24. Asked the location of the ram with respect to the buildings or other objects on the Kissinger farm, witness says, "I would call it in a southwesterly direction from the house."

In point of fact it is in a northerly or northwesterly direction (see plan of Draper farm, p. 2450, complts' closing testimony). This blunder is emphasized by the next answer (q. 25), in which the witness says he is not positive, but thinks that the house faces due *south*. By accident, the witness guessed rightly in this, which only makes the more glaring his error as to the situation of the ram.

Q. 26. "The ram was in a deep ravine which ran down between the schoolhouse and the Kissinger house."

The fact is, as subsequent testimony shows, that there is no schoolhouse near, or within sight of the Kissinger house, and never has been within the memory of man.

"Would say the ram was in operation, as the piston or valve, or whatever you call it, was working."

This witness was brought all the way by the defendants from Dakota, and it seems to have been prearranged that he should pose as an entirely unsophisticated and untutored witness.

Testifies in cross-examination that he travelled all the way from Dakota to Chicago with one of defendants' counsel, a journey of a day and a half, *and that during that time this subject of the ram was not mentioned.*

He further says that he received no notification or intimation that he was wanted until the very morning he left the West, from defendants' counsel, and that the only information vouchsafed to him then was that he was wanted to come and testify about the Kissinger ram (x 41–55).

Q. 56. That was the first time that this subject of the ram was ever mentioned to me by anybody, except what talk we may have had *the day we saw it.*

The next witness, Kreidler, the alleged companion of Given in his journey to the Draper farm, testifies: —

X Q. 80–90 (pp. 139, 140, surrejoinder), that *three weeks* before this precious testimony was given, Mr. Church, one of defendants' counsel, and their agent Fenn, had asked him where Given was. He did not know, except that Given was in the West; about three *days* afterwards Messrs. Church and Fenn informed Kreidler that they had found where Given was, and at the same time *told him that they had communicated with Given by telegram, asking where a letter would reach him, and that this telegram had been sent in his (Kreidler's) name.*

To continue with Mr. Given (p. 125): "The schoolhouse referred to in my direct testimony was the village schoolhouse, on one side of the railroad track on a hill. Couldn't say how far we walked that day, and don't remember the road we took. Don't recollect what other places we visited that day. Think we were at the schoolhouse. It is not a great way from the schoolhouse to the Kissinger farm. It stands on a hill, on what I call north from the schoolhouse. The Kissinger house can be seen plainly from the schoolhouse. There is a deep ravine between the schoolhouse and the Kissinger house. The Kissinger house is on one side of the ravine and the schoolhouse on the other."

In redirect examination witness says that Mr. Dixon, the counsel for defendants, with whom he travelled to Chicago, told him he did not want to say anything to him about this ram matter: wanted witness to go entirely on his own recollections, and that Mr. Church, another of defendants' counsel, spoke to like effect. They wanted it "as I recollected it without any refreshing of my memory."

What the result would have been had this policy been pursued

with other witnesses is pretty distinctly shadowed forth by the mess Given made of it. He misplaces the ram, emphasizes that blunder by guessing correctly the direction in which the house fronts, puts a schoolhouse where no schoolhouse ever was, and emphasizes that mistake by stating that he and his companion visited that schoolhouse.

Subsequently defendants made a ludicrous attempt to patch this last matter up. It appears that there was, on the Draper farm, back of the little ravine in which the ram is situated, an old log house; and defendants' counsel tried to induce their witness, Dr. Traver (p. 214, surrejoinder), to turn this old log house into a schoolhouse by asking him (q. 10) whether its appearance was such that a stranger carelessly looking at it might mistake it for an old-fashioned schoolhouse, to which witness makes the perfectly safe reply, "such *might* have been the case."

Cross-examined (p. 214). Dr. Traver says that at the time he took the assessment of 1876 (Given's year) "it appears to run in his mind that the old house was partly fallen down. There were a couple of old buildings, *such as hog pens* or other outbuildings, that may been gotten mixed up in his mind with the spring house." "Things were pretty badly dilapidated about the outbuildings." The doctor admits that he hardly thinks that there has at any time been a board of school directors in the borough of Marysville that would have been guilty of such a mistake as placing the village schoolhouse at the edge of a barnyard, several hundred yards away from the road.

The climax of absurdity is reached when it is shown by the testimony of complainants' witness, Wenrick (p. 2377, complts' closing proofs), that the old log house which defendants' counsel, for their witness Given's sake, endeavored to transmute into an hypothetical village schoolhouse, in 1876, was, in 1875, about all torn down, the timbers good for nothing, while those which could be used at all were, in 1875, used by Kissinger and Wenrick *to put up a pig pen.*

George W. Kreidler (p. 129). — Mr. Given's alleged companion in the inspection of the ram in 1876. He gives, as might be expected, a story which, on the whole, does not materially differ from

that of Given, save in one very suggestive particular. The "untutored" Mr. Given had had sufficient regard to the emergencies of the situation to place "*boards*" around the walls of the ram pit in 1876. Mr. Kreidler, in cross examination (p. 111), says there was a hole dug out and the ram put in and *loose stones* set in around it, — loose stones around the hole.

It appears from Kreidler's deposition that he has been living at Marysville ever since 1876, and furthermore that he is a son-in-law of Mr. Oliver Miller, who, officiating as defendants' first witness upon this subject of the hydraulic ram in their surrebuttal (p. 577), *became immediately thereafter* (*if not before*) *their agent to collect testimony and summon witnesses* (Kreidler, x 46 to 53).

It further appears in cross-examination (x 43–45) that since September, 1883, Mr. Miller and Mr. Kreidler have been living under the same roof (the taking of defendants' surrebuttal commenced in October, 1883). Defendants' counsel appreciated the necessity, under these circumstances, of some explanation of the witness's very late appearance on the scene, and so (q. 35) he is made to explain it by saying, "I never wanted to be drawn into it. It has been just through ordinary conversation with parties at Marysville that I have been called as a witness."

After this, it is not necessary to dwell upon or especially point out the disingenuous and evasive nature of the witness's testimony in cross-examination.

ANDREW J. TRAVER (p. 209) and JOHN H. HARPER (p. 236). — These, two of defendants' surrebutting witnesses, are simply recalled to say that, notwithstanding all the facts brought to their notice by complainants' agents, they remain of the same opinion as they were before.

Mrs. SARAH SMITH (p. 76) and Mrs. MARY E. MORLEY (p. 143), the mother and wife of defendants' witness, Thomas W. Morley.

(Mr. Morley, it will be remembered, is one of the gentlemen who officiated as triennial assessors at Marysville in 1876, and are supposed to have visited Mr. Kissinger on the Draper farm, during which visit conversation ensued, in course of which Mr. K. is made to say he had an hydraulic ram in. Mr. Morley has twice testified — once in defend-

ants' surrebuttal, and again when recalled in their surrejoinder (p. 152) — that he does not pretend to remember having been a party to or to have heard any such conversation.)

These ladies of his family are called to make good Mr. Morley's deficiency by testifying that they remember Mr. Morley's speaking about the ram and going on to explain the working of it, and the manner in which the water was carried to the house through it.

This, they say, was while Mr. Morley was assessor in 1876; but apparently the only particular reason that they have for saying this is a present impression that they were living at the time in a house from which they moved in 1878.

Defendants having chosen to reopen the subject by introducing purely cumulative testimony in surrejoinder, it was competent of course for the complainants to reply in their closing proofs, and of this right they have availed themselves to present the following depositions: —

Mrs. SARAH MOORE (p. 2368), wife of Robert O. Moore, daughter of David Cowens; lived at Cowens's with her husband two years from the spring of 1878.

(P. 2369.) During the spring and summer of 1878 was frequently at Mr. Kissinger's place. "During that spring and summer th family carried their water for household use up the hill, as far a know." "*Know that a ram afterwards was put in there to force th water up to the house.* The water ran into a barrel up near the house out of a kind of spout or iron pipe. The barrel and pipe were not there when I commenced to go there that spring and summer. We have that barrel now; bought it at Kissinger's sale.

"(P. 2370.) *Remember my father going down to see Kissinger, and Kissinger said he could have the auger to bore some logs if he wanted to; and father came home and looked in our timber land for some chestnuts, but we did not have any large enough, and so he didn't make any. That was in the summer of* 1878."

This confirms the statement of Mr. Cowens in his testimony for the complainants, that it was *after* the roots had grown into his pipes that he considered the project of adopting log pipes, and went to see Kissinger's log pipes in consequence.

ROBERT O. MOORE (p. 2371), husband of the foregoing witness. Defendants' counsel thought it worth his while to have the fact noted on the record that this witness is a colored man. The only apparent reason for this precaution is that no one had thought it worth while to note on the record, what is nevertheless the fact, that the witness's wife and her father David Cowens are also colored. Mr. Cowens is a substantial farmer, and proprietor of about ninety acres of land (p. 2466, complts. closing proofs.)

This witness testifies that having occasion during the year 1878 while hiring with his father-in-law, to pass the Draper farm with a team, hauling stone, he one day, in passing along the road, noticed timbers trestled up; made inquiry as to what they were doing and was told they were going to put a ram in to throw water up to the house. Thinks it was Mr. Cowens who told him; witness made the inquiry after he got home.

Witness was particularly cross-examined as to the point on the road from which he saw the logs on trestles, which he says were on a little bank to the right of the barn, and that is where all the testimony says that the log pipes were bored. The object of the cross-examination was apparently to lay the foundation for questioning the possibility of seeing the logs at that place from the points on the road named by Moore; but this question is satisfactorily settled by the testimony of a photographer, Cockerell (p. 2400), and the pictures which he produces, and which are in evidence, and by the testimony of the engineer, Theodore C. Ives (p. 2453), and that of David Cowens (p. 2460–2). After this testimony defendants did not care to make any other or further attack on Mr. Moore than that he is a colored man.

The depositions of Mrs. Louisa Crouse (p. 2467) and John M. Vink (p. 2480) have been already referred to; they show that the strainer which, after the putting in of the ram, was placed on the end of the feed pipe in the spring to prevent that pipe becoming clogged with leaves or dirt, and which strainer defendants' witnesses, John H. Rhoads and Joseph W. Rhoads, say they noticed in the fall of 1876, was not made until the 4th of November, 1878.

The statements of the witnesses are authenticated by the production

of Mrs. Crouse's book of accounts, which contains the following entry, under date of Nov. 4, 1878: "Geo. Kissinger, to *funnel* and soldering pipe, .75." The funnel was the strainer in question, and is fully described by Vink in his testimony.

It further appears that the item, "soldering pipe," refers to one of the lengths of iron pipe for the ram, which burst from the effects of frost a night or so after the ram was put in.

B. F. ZIMMERMAN (p. 2095, rejoinder), a brother of complainants' witness, James C. Zimmerman, testifies that he visited his brother while living with his father-in-law, George W. Kissinger, in Marysville once, and that was in the spring of 1877. Fixes this date because it was the spring before he was married, and the spring he was through with his trade. On that visit stayed at Kissinger's house two nights. The family got their water from the spring by carrying it in buckets. Carried some himself, and saw members of the family fetching some in buckets. There was at that time no hydraulic ram on the place connected by pipes from the spring to the house.

Cross-examination (p. 2101), witness says, "Never saw an hydraulic ram in operation. Have seen a ram; don't know whether it was hydraulic or not. That was in 1881 or 1882, about a mile from Elliottsburg."

JOHN WENRICK (p. 2376, closing proofs), carpenter, lived in Marysville from March, 1873, to March, 1881; worked for the Northern Central Railroad Company, in the round house, at car repairing, for over five years from Oct. 19, 1875. From the spring of 1874 to October, 1875, was living in a house of his own, working at carpenter work through the valley. Has known Geo. W. Kissinger since 1870; worked for him while he was living on the Draper farm, in the year 1875. During that summer helped him to do some truck work; also repaired his threshing machine; hewed some timber in the woods or at the foot of the mountain; finished the hewing at the wood pile. Built a shed to run his wagons under and his kettles to boil apple butter in. That shed was built in the summer of 1875, by witness, with the assistance of Mr. Kissinger.

The wood pile was northwest of the house. Repaired the thresh-

ing machine back of the barn. Used carpenter's trestles for cutting out ground sills for fastening down horse power of threshing machine; also used them for balancing cylinder of threshing machine.

Of the timbers prepared for building the shed, two pieces were twenty feet long and three twelve feet long; the posts were old pieces of stuff lying around there. This shed was built after the harvesting of the grain, which in that region is about the first or second week in July.

This piece of testimony shows the existence during the year 1875 of a condition of affairs affording a charitable explanation of some of the testimony for the defence. It shows that trestles were being used on the place and timbers of considerable size lying around, and it may be that some of the witnesses who say that they saw log pipe being bored at that time saw these things to which Wenrick testifies. After an interval of years, and under the influences brought to bear upon them, it involves no attack upon their good faith to suppose that their imagination has beguiled their memory.

Mr. Wenrick further testifies that while working for Kissinger in the summer of 1875 he got his meals with Mr. Kissinger and the family. Did not while working on the farm see any wooden pipe being made or bored. Did not see any pipe auger. Did not see any trench or trenches dug or being dug to receive pipe, and did not, during that time, hear anything said by Mr. Kissinger or his family about boring or laying pipes, or about introducing an hydraulic ram upon the premises.

This witness's testimony is very clear, very straightforward, and bears the air of being the statement of a man at once truthful and intelligent, and gifted with good memory. It adds very greatly, too, to the weight of his testimony to know that defendants' very zealous agent, Mr. W. K. Fenn, had taken the trouble to visit Wenrick at his home, at Steelton, during the taking of the surrebuttal, and that the defendants did not call Mr. Wenrick.

Contemporaneously with the taking of the depositions of Given and Kreidler at Harrisburg to prove that the ram was in and working in the year 1876, defendants were taking at Dover, Del., the deposition of Thomas Draper. At and before this time they knew that Mr. Draper was convinced of his error in his former deposition,

so far at least as concerned the date at which the ram was put in. He therefore was not questioned on that subject in the direct examination.

In cross-examination he was asked: —

"*X'Q.* 56. Your present recollection and belief is that it was in 1876 that the ram was put in, is it not?

"*A.* My impression is now that it was put in either in 1877 or 1878."

To the next question he answers: —

"*A.* I can't say positively whether I first saw it when I went with my daughter in 1878, or with my wife in the fall of 1877."

As these answers were made only about five weeks after Mr. Draper had voluntarily written a letter to one of complainants' counsel (see p. 253, surrejoinder), in which letter he uses the language, "I feel sure that (the ram) was not put in until 1878," it is apparent that Mr. Draper has either a very short or a very shifty memory.

Defendants' counsel objected to the cross-examination of the witness upon this subject on the very curious ground, among others, that the witness had already substantially indicated that he had no recollection as to the time when the ram was put in, and that he was not there when it was put in; and that the witness's *belief* is not competent evidence in this case. Now the record shows that Mr. Draper had quite as good means of fixing the time at which the ram went in as he had of fixing that at which it was ordered. The testimony of his own daughter and of his agent, Mr. Foulk, shows that he, Draper, was at the Marysville farm within a day or two after the ram was put in, and took so active an interest in the subject as to invite Mr. Foulk to take a tour of inspection with him to see the ram and its operation. Mr. Draper, if he had any memory at all, or cared to exercise it, for the sake of the truth, should have been able to recall these circumstances. But it was rather late in the day for defendants, after having deliberately, in their surrebuttal, *elected to make the date of the putting in of the ram the test of Mr. Draper's accuracy*, to take refuge in the pretence that he had no recollection on that subject, and that his belief is not evidence. If he does not remember when the ram was put in, what

does he remember? He, as landlord of the place, was personally interested in the matter; he had taken sufficient active interest in it to go with Mr. Kissinger to give Drawbaugh an order for it: he states in his original deposition for defendants (p. 1174, x 49) that *he was anxious to see how the ram would work*; and, as the record shows, his interest led him to pay a visit to the place and see the device within a very few days after it was put in. To be sure, in his original deposition, he says (q. 9) that he was not present *when* it was put in, and does not know *exactly* when it was done; but the one distinct feature in that deposition is his very clear impression that there was an interval of *not more than one season* between the ordering and the putting in of the ram. His only doubt is not as to whether there might have been a longer interval than that, but whether the interval was so long.

We very readily admit that when he originally testified he had no real recollection of the year, either of the ordering of the ram, or the putting in, and that he had taken no pains whatever to ascertain, by inquiry or discussion, or by reference to books or papers, the real date of either event, and that, consequently, his statements as to the date of the putting in of the ram, and as to the date at which it was ordered, are equally valueless. The one thing certain about his recollection at the time he originally deposed for the defendants was, that there was an interval of but one season *or less* between the two events, *and this was the one particular as to which he was right.*

In surrejoinder, Mr. Draper is again asked what year his visit with Mr. Kissinger to Milltown to order the ram took place, and he replies, "Some time in the year 1874; I cannot say precisely what time, but I know it was before I commenced to build the vessel." The reference here is to a schooner which the witness built, and the building of which seems to have occurred between November, 1874, and August, 1875 (pp. 171–3, surrejoinder). The building of this vessel, and his visit with Mr. Kissinger to Milltown to order the hydraulic ram, Mr. Draper undertakes to connect in this wise: that he knows that the visit was before he commenced to build that vessel, because —

"Mr. Kissinger and I were up in the woods together, and I was looking at some crooked white oaks that were there, and I remem-

ber distinctly telling him that I wished I had them at home, as they would be of some use to me there, and there was none there."

No such means of fixing the alleged time of the visit to Drawbaugh's shop had occurred to Mr. Draper at the time he originally testified for the defendants, *nor at any time, until after defendants' effort to swear the ram in in* 1876 *had ended in disastrous failure.* It is perfectly evident that this whole matter is an afterthought, and simply an argumentative connection of totally unrelated things. Mr. Draper does not say what he and Mr. Kissinger were doing up in the woods together; he does not pretend that they were there upon any matter having any relation whatever to the ram, and it may be concluded that in fact there is no connection between the real or imagined visit to the woods, and the visit to Drawbaugh's shop, beyond that which the witness manages to evolve from his own inner consciousness.

Furthermore, in cross-examination (x q. 117–124), Mr. Draper betrays a total lack of any real recollection about his supposed visit to the farm in 1874.

The truth seems to be that Mr. Draper having in his mind a medley of reminiscences of things which happened, or which he thinks happened, at some one or other of his several visits to the farm, picks out from this medley, such things as he thinks will fit the supposed visit about which he is being specially questioned.

Mr. Draper further deposes (p. 175) that he remembers seeing an auger such as is used for boring wooden pipes at the farm, and feels *sure in his mind* that he saw it there during his visit in April, 1875. Does not *think* he was there any more until February, 1877; *it possibly may have been then*, when he saw it, but he don't *think* so. "Mr. Kissinger said it was Keller's auger." Now the proofs fully establish the fact that this Keller auger did not come into Mr. Kissinger's possession until some time after the spring of 1876; and it is evident that Mr. Draper has no real recollection as to *when* he saw that auger on the farm; and, when he says he feels "sure in his mind" that it was during his visit of April, 1875, it is simply a case of the wish being father to the thought.

In the course of Mr. Draper's examination in the surrejoinder, the defendants took occasion to introduce a diary or pass book belonging to witness, and in which are entered certain rent accounts for the years 1874, '75, '76 and '77, between Messrs. Draper and Kissinger, relative to the Marysville farm. The only apparent reason for introducing these accounts is that in the account relating to the year 1876 is an item, "expenses of ram, $60." It is perfectly obvious on the face of the account that the item does not belong there, and that it was not there when the account for that year was originally made up. This is evident from the fact that, while this item is entered on the credit side of the book, it does not form any part of the footing which is deducted from the rent on the other side of the book. In cross-examination, Mr. Draper admits that *at the time he gave his first deposition for defendants in Philadelphia* he had this book with him (x. 129). The book was not used at that time, and that is an admission on the part of the defendants that they did not then consider it evidence of which they could make use. Not only is it palpable on the face of the account that this item — expenses of ram, $60 — was not in the account of the year 1876, as originally placed in the book; but Mr. Draper, in the course of his examination in the surrejoinder (q. 48), admits that the item was placed there when he and Mr. Kissinger settled, *which was in the fall of* 1878 (q. 48, 49).

The defendants, therefore, in introducing this account, knew that the entry for the sake of which they introduced it, was not a contemporaneous entry, and that their witness would be obliged to admit the fact. The object of the introduction of the book is made evident by the redirect examination, where question after question is aimed at the witness for the purpose of driving him to say that the item was, in the fall of 1878, entered in the 1876 account, *because it was considered right and proper to put it in the* 1876 *account rather than in that of* 1877 *or* 1878; but the witness, willing as he is, cannot be driven to commit himself to any such statement. He says: —

"*Q.* 136. I can't positively say why the item was put in '76 account, but my *opinion* is it was done according to Kissinger's direc-

tion. I can't positively remember, but some of his expenses *might have been* in that year. I suppose Kissinger had an account of it himself. He was to do it for $60; that was the first contract."

To q. 138, suggesting to the witness that the item was so placed because it was considered right and proper by the gentlemen who acted as referees, in the settlement, that it should not be entered in the accounts of 1878 nor in the accounts of 1877, but in the accounts of 1876, the witness answers, "I can't say positively that they took that into consideration"; and to the next question, suggesting that this mode of entering the item was considered between *him* and *Kissinger* right and proper, the witness simply says, "*I think so, or we should not have so placed it. It has been a long time, and I don't remember any controversy over it*"; thus showing that he has no recollection, or none that he cares to mention, as to how or why the item was so placed.

It is to be noted that the years to which these accounts refer run from one April to the April following, so that the 1877 account refers to the period between April, 1877, and April, 1878; and the settlement made between Messrs. Draper and Kissinger in the fall of the latter year was for the period ending April, 1878. Mr. Kissinger, in his subsequent testimony for complainants (pp. 2413–14, complainants' closing testimony), offers an explanation of the entry of this item — expenses of ram, $60 — in the 1876 account, which the face of the accounts themselves shows to be the true one. He points out that the credits to him for items pertaining to the year from April, 1877, to April, 1878, left a balance due Mr. Draper for that year of a little over $50, and, to use Mr. Kissinger's own language, the $60 for the ram were not deducted from the balance of the *last* year's rent, because "he could not take $60 off $50, *and it was set back on that account.*"

In the redirect examination (p. *202), the defendants' counsel thought it necessary to put in evidence a letter written by one of complainants' counsel to Mr. Draper, in which the writer expresses the opinion that no dishonesty was involved in the appearance of the item — expenses of ram, $60 — in the 1876 account, this letter having been written in reply to one from Mr. Draper, which was put in evidence a little later, and in which Mr. Draper complains that dishon-

esty in the matter had been insinuated. We do not think, nor have we meant in what has been said, to intimate that the making of the entry was an act of dishonesty or trickery on Mr. Draper's part, but we do mean to say very distinctly that it was something very like that on defendants' part to introduce this book into the case *after having once declined to use it*, at a time when, if ever, it *should* have been used; the only apparent object of this late introduction of the book being that the accident of the item — "expenses of ram, $60" — having been entered in the 1876 account, gives apparent color to a "suggestion" which defendants know to be a false suggestion, and which they tried in vain to have their witness Draper adopt.

It is sufficient to know that all the inducements extended by defendants' counsel did not suffice to lead Mr. Draper to commit himself positively to the statement they wished, — that the item was put in the 1876 account because it belonged there. Having once been driven to admit that the ram was not put in until 1878, even Mr. Draper would not commit himself to such a statement as that. It only suffices to show to what straits the defendants felt themselves to be driven when, for the mere sake of a false suggestion possible to be based on these accounts, they would at the very last stage of the case offer in evidence a book which, when it was first produced to them, they rejected.

But the principal card which the defendants played in connection with the recall of Mr. Draper was the production of a letter from Mr. Kissinger to Mr. Draper, dated May 30, 1875 (printed, p. 169, surrejoinder). In this letter Mr. Kissinger says: —

"i receved your Letter about the pipse now they sey non will do but iron pipe to go *up hil*, now i can get som god ole pipe here."

The allegation is that the mention of pipe in this letter has reference to pipe *for the ram;* and Mr. Draper (q. 18, p. 169) is asked if he remembers the circumstances which led him to write to Mr. Kissinger about the pipes, and, if yes, to state them. He begins by saying, "*I don't remember of writing at all; I suppose I must* have written." Then he goes on to say: —

"When I was at Marysville in 1875, Mr. Kissinger had some saplings cut and hauled up that he said were for the piping to run the water *from the spring to the ram*. I told him they would not

do; that by the time he bored them there would be nothing but sap left, and I didn't wish to pay for putting in piping of that kind. I told him he could use them for something else, or had better use them for something else, — something to that effect; and should cut larger ones. I then told him I should be in Philadelphia a day or two as I came home, and I would see if we couldn't get some terra-cotta piping, that would answer *the same purpose, and it might be as cheaply as to bore the chestnut logs.*"

Now note that the statement thus far is in substance that he, Draper, suggested the use of terra-cotta pipe *as a substitute for log pipe to run the water from the spring to the ram*, which is, of course, DOWN HILL, and then mark what follows: —

"During my stay in Philadelphia I went over to Camden to order some decking for a new schooner that I was building. On the street, just after I went over Market Street ferry, a square or so up, I saw a pile of terra-cotta piping laying on the pavement. I went in and inquired about it — as to whether it would do or answer my purpose — told them what I wanted it for. They told me that it would *not* answer, *that it would not bear a pressure; it would not answer to run up hill*, — that is, much up hill; that it might raise a foot or so, or perhaps a few feet, or would do to run on a level or down hill. I told them what sort of a hill my house was on. I did not buy the piping, but *suppose* I must have written to Kissinger about it, from the tone of that letter. I didn't know at the time the height of the hill my house was on, but told them it was a pretty high hill, and they told me that the piping would not answer to go up to the house, BUT WOULD ANSWER TO RUN FROM THE SPRING TO THE RAM."

In other words, Mr. Draper, according to his own story, having found that the terra-cotta pipe would answer for the *only* purpose for which he proposed to use it, to wit, for running the water down hill from the spring to the ram, refrained from buying the pipe, and wrote to Mr. Kissinger — for such is the insinuation — that terra-cotta pipe *would not answer*, because he was told that it would not do for running water *up hill*, — that is, from the ram to the house — A PURPOSE TO WHICH HE HAD NOT SUGGESTED APPLYING IT. The difficulty was that Mr. Draper desired to tell, not the truth, but a story which would fit with the terms of Mr. Kissinger's letter of May 30, 1875, which alludes to pipe to go *up hill*.

Besides, if there were any truth in the story at all, which there is not, it would not tend to prove that which it is designed to prove, to wit, that prior to May 30, 1875, the ram had been ordered, but

tends distinctly to prove the contrary, because it is simply preposterous to suppose that either Mr. Draper or Mr. Kissinger, *after* having seen Mr. Drawbaugh on the subject of the ram, discussed the matter with him, ascertained what was necessary, made a contract with him for the ram, and agreed upon the price, should for a moment have entertained such an absurdity as the use of terra-cotta pipe for use between the ram and the house.

If, as Mr. Draper says, or rather insinuates, he made inquiries about the fitness of terra-cotta pipes for use to convey the water under pressure from the ram to the point of delivery near the house, *it is proof conclusive that this happened before the visit to Drawbaugh's shop.*

Moreover, the record shows that Mr. Draper purchased, and had sent to Marysville, the iron pipe which actually was used with the ram; and of course he did this in consequence, and as a part, of the order given to him; and there is no pretence that after the joint visit of Draper and Kissinger to Drawbaugh's shop to order the ram, there were any further negotiations on the subject.

It is enough, however, that Mr. Draper's story is not only an eleventh-hour story lugged in under peculiarly suspicious circumstances, but is self-contradictory — an untruth on its face; that it makes him propose the use of terra-cotta pipe for a certain specific purpose, *for which he ascertained that it would do*, and then give up the project, because he found that it would *not* do for another purpose, for which he had *not* proposed to use it.

During the course of Mr. Draper's examination he was asked whether he had recently shown the letter of May 30, 1875, to Mr. Kissinger, and if so, what, if anything, he said about the handwriting of the letter (q. 17), to which his reply was, "I don't know that he said anything about the handwriting; I showed him that letter in connection with all the letters that I had, and he said that they were his letters." "He remembered them. That one written in 1875, with reference to the piping and peach trees, he said he particularly did remember that one." In cross-examination (x 82–89) it appeared that Mr. Draper, in company with Mr. Church, one of defendants' counsel, and Mr. Fenn, defendants' Marysville agent, had taken all the trouble to visit Mr. Kissinger at

his home in Easton, Md., with these letters. And he (Draper) states that at that interview Church asked Kissinger if the pipe spoken of in that letter was not intended for the ram that he put in on Draper's farm in Pennsylvania; to which Draper says Kissinger replied, "Yes, *I suppose* it was" (x 87, p. 193).

"X *Q.* 88. Didn't Mr. Kissinger say, while you were there, that the pipes spoken of in that letter were pipes which he spoke of putting in, to run the water from a spring up on the hillside up to the house without pumping?

"*A. No, sir;* he said they were pipes spoken of when we first spoke of running the water *from the spring to the ram*, or to where they put in the ram."

Now the terms of the letter itself contradict this statement. The mention in the letter is of pipes to run "*up* hill." Furthermore, Draper's distinct statement that Mr. Kissinger did *not* say that the pipes spoken of in the letter were pipes to run the water from a spring up on the hill to the house without pumping, is practically contradicted by one of defendants' counsel, Mr. Church, who subsequently acted as a witness for his clients with reference to this same interview with Mr. Kissinger at Easton, Md. Mr. Church distinctly testifies (p. 256, defts' surrej.) that when the letter of May 30, 1875, was shown to Mr. Kissinger he turned to Mr. Draper and said to him, "*You remember, Mr. Draper, we talked at one time of getting water from that upper spring.*"

Again, while Mr. Draper in cross-examination (x. 87) says that Mr. Kissinger, in reply to Mr. Church's question as to whether the pipe spoken of in that letter was not intended for the ram, said, "Yes, I suppose it was," he is very much less positive in the redirect examination, where the following question is put to him: —

"*Q Q.* 152. If I understand you correctly in your cross-examination, Mr. Kissinger, during that interview in Easton, admitted or stated that the iron pipes which were mentioned in 'Exhibit Kissinger-Draper Letter, May 30, 1875,' were pipes for the ram: is my understanding correct or not?

"*A.* I *so understood him* in his answer to a question asked him, *I think*, by Mr. Church."

We shall take occasion to consider more fully, further on, the occurrences during this interview with Mr. Kissinger at Easton, Md.

After taking Mr. Draper's deposition, defendants proceeded to examine one of his sons, and his wife, for the purpose of extracting from them, if possible, statements which should seem to, in some degree, confirm Draper's story.

What the result was, the depositions tell for themselves.

THOMAS B. DRAPER (p. 206, surrejoinder), a son of Thomas Draper, testifies that he heard a conversation between his father and Mr. Kissinger about an hydraulic ram for the farm at Marysville, and during a visit which Kissinger paid to his father in 1876, during the Centennial Exposition. Does not say what the conversation was, and, as there is no dispute that the subject of an hydraulic ram was under consideration long before there was any action on the subject, this is altogether immaterial.

Witness further testifies (q. 5) that he remembers hearing his father say something about a visit to Drawbaugh's shop to order a ram, and about seeing a talking machine there, and that, *to the best of his recollection*, this was before Mr. Kissinger was down in 1876; but he gives no reason whatever for his alleged recollection.

Mrs. ANNA E. DRAPER (p. 207), the wife of Thomas Draper, testifies to hearing her husband speak of Mr. Drawbaugh's talking machine, and that this was at their home on the farm near Magnolia. They continued to live at Magnolia down to January, 1880. (Miss V. M. E. Draper, x 64, p. 1893, complts' rej.)

The most strenuous efforts of defendants' counsel failed to induce Mrs. Draper to commit herself to any statement of time. She is asked:—

"*Q.* 11. Are you able to state whether that conversation took place in 1874, 1875, 1876 or 1877?

"*A.* I cannot positively state what time it was.

"*Q.* 12. You cannot state positively that it was not in 1874, then, if I understand you?"

But this witness was not of a quality to be dealt with in that way, and her answer is, "*I have already told you that I do not know when the conversation was.*"

The only comfort which defendants were able to extract from this witness was that she don't remember *now* to have heard anything about a talking machine, or about Mr. Drawbaugh, when she and her husband were on a visit to Marysville in the fall of 1877, nor remember hearing anything said about her husband going at that time to Milltown to see Mr. Drawbaugh.

WILLIAM K. FENN, *defendants' agent*, was put upon the stand (p. 215, surrejoinder) for the ostensible purpose of identifying Mr. Kissinger's handwriting in the letters, but really to testify that Mr. Kissinger, during the interview at Easton, had admitted that the pipe referred to in the letter of May 30, 1875, to be for the ram. Mr. Fenn says (q. 10), "He said the old pipe was some that he expected to get for the ram." Mr. Church asked him the question as to whether the old iron pipe referred to was for the ram or not, or for anything else, and Mr. Kissinger replied, "they were for the ram."

JOHN B. DRAPER (p. 251), a son of Thomas Draper, is called to testify that in April or May, 1884, while complainants were taking their proofs in rejoinder, in Philadelphia, he called on complainants' counsel, Mr. Storrow, at his hotel there, and, to the best of witness's knowledge, told him that "father had a letter from Kissinger, dated May 30, 1875, and that the letter mentioned some iron pipe that could be had either somewheres up here, or I don't know where." The interview was from three to five minutes.

The only object of this little piece of testimony seems to have been to try to show that, before the closing of the proofs in rejoinder, complainants' counsel were made aware of the contents of the Kissinger-Draper letter of May 30, 1875, yet did not communicate with Mr. Draper, or take steps to inform themselves more fully about this letter. *Why* complainants' counsel did not think it proper to have any further communication at that time with Mr. Thomas Draper will, we think, be sufficiently clear from the following letter, written by Draper to one of complainants' counsel, and which, we think, speaks so eloquently of Mr. Draper's character, that we give it here in full: —

(It will be understood, of course, that the italics are our own.)

DOVER, DELA., May 1st, 1884.

MR. J. J. STORROW:

Dear Sir, — My Daughter told me since she came home that the statement on my diary of the settlement of 1876 showed when photographed that there had been some figures rubbed out and sixty Dollars written over them, and that she thought that Mr. Comfort believed, or rather insinuated, that I or some one had done it on purpose, and that no one on earth could make him believe that I was at Drawbaugh's in 1874. Now I don't care a fig what he or anyone else believes, nor do I care about the rubbing out of the figures; anyone with a half a share of common sence can see at a glance what was done; and it is but a common occurrence in accounts. The first two lines were added up before the $60 was entered; had I intended to cheat anyone I should most undoubtedly have rubbed the figures and lines, and not have left it in that way. I am not doing that sort of a business. As I told you when I was at your place, you are all alike to me. *I do not know who is entitled to a judgment, nor do I care, so it goes right. This much I do know, that I was at Drawbaugh's in* 1874, *& saw his instruments.* The Bell Company might have been for years before that for anything I know. *I could have shown you a letter that would have convinced you in a moment that I was correct in my statement, but I could not get the consent of my mind that that would be doing right; nor have I ever shown it to the Company, or let them know that I had it. I wish I did know who is right. I am convinced now that I was mistaken about the time the ram was put in. I feel sure that was not put in until* 1878.

Ever Truly,

THOMAS DRAPER.

I may possibly be up next week.

Defendants objected to the introduction of this letter as not competent, and as new matter, and were seemingly so far disturbed by it as to, on the next day, add the further objection, that it should have been put in during the taking of Mr. Thomas Draper's deposition by defendants, in order that defendants' counsel might then have had opportunity of examining Mr. Draper with reference to its contents; but complainants do not perceive anything in Mr. Draper's deposition that made it necessary to introduce the letter then; while the deposition of John B. Draper, stating *one* communication with complainants' counsel, seemed to call for the substantially contemporaneous communication upon the same subject.

The written reply which complainants' counsel made to this letter from Mr. Thomas Draper had, before the introduction of that letter

by complainants, been offered in evidence by defendants in connection with Draper's deposition (p. 202, surrbtl).

In reply to Mr. Draper, complainants recalled

GEORGE W. KISSINGER (p. 2404, closing testimony).— Mr. Kissinger (ints. 1 to 14) says in substance that early in the spring of 1875 Mr. Draper visited the farm, and the two had a talk about running water in pipes from the *upper* spring to the house, or as near to the house as the spring would carry it, and that the reference to "old iron pipe" in the letter of May 30, 1875, was to some which he, Kissinger, thought he could get at Marysville for that purpose.

Mr. Kissinger denies point blank Mr. Draper's story as to his having, in the spring of 1875, cut saplings for log pipes; denies that any such conversation as Mr. Draper narrates ever took place between him and Mr. Draper, and says that at *no* time while he lived on the farm, from the spring of 1874 to 1880, did he ever cut for pipe a lot of logs that were so small he could not use them, and had to cut others in place of them. (Ints. 15–17.)

[In this connection it should be remembered that Mr. Kissinger is a carpenter by trade.]

Mr. Kissinger was then asked as to the interview which Messrs. Church and Fenn had with him at Easton, Md., before Mr. Draper took the stand, and states that he did *not* at that visit tell these gentlemen, or any of them, in substance, that the pipes referred to in the letter of May 30, 1875, were for the ram, but that he *did* tell them that the pipes referred to in the letter were for the water to run from the hill down (q. 18 to 22).

Mr. Kissinger (q. 50) repeats the statement of his former deposition, that the visit of himself and Mr. Draper to Drawbaugh's to order the ram was in 1877, the year before it was put in; and states that on the way over *they stopped at Herman Eppler's shop* (see Eppler, p. 851, *supra*); that they went over to Drawbaugh's in a light spring wagon, and that the wagon was one which he had bought from Mr. Kaffenberger.

Mr. Kaffenberger testifies (p. 2475, complts' closing proofs) to the sale of this wagon to Mr. Kissinger in 1876, fixing the time as hav-

ing been two or three months subsequent to March, 1876, when he had sold the horse which he had been in the habit of using with the wagon.

Mr. Draper himself testifies (x 120, p. 198, surrej.) that he and Kissinger went to Drawbaugh's in a spring wagon.

Defendants endeavor to break the force of this testimony by having Mr. Kaffenberger say in cross-examination that Kissinger, like other farmers, was in the habit of borrowing; but witness does not know that Mr. Kissinger ever borrowed this spring wagon.

With reference to the item "expenses of ram $60," in "Exhibit Draper Diary," under date of 1876, Mr. Kissinger states, as Mr. Draper had, that the entry was made in the fall of 1878; that at the settlement come to between them at that time, there was a balance found due to Mr. Draper of a little over $50 (q. 94, 95), and Mr. Kissinger gives what is obviously the true explanation of the entry of the item in the account for the year 1876, where it obviously does not belong, instead of in the account for 1877 (see p. 866, *supra*).

Mr. Kissinger was subjected to a long and nagging cross-examination; and to show that his recollection as to the exact time at which he visited Drawbaugh's shop had not always been the same, a letter written by him to defendants' counsel, Mr. Jacobs (p. 2423, compls' closing testimony), was introduced. In this letter — the writing of which was a voluntary act on Mr. Kissinger's part, out of good nature, from a desire to do all that he properly could for his old acquaintance Drawbaugh, — Mr. Kissinger gives Mr. Jacobs a transcript of certain items of account between himself and Draper, among which items is one dated Feb. 22, 1877, to cash, $7.00, and Mr. Kissinger expresses the opinion: "The year and time I paid Mr. Draper them $7.00 was the time, *I think*, that we were over at the shop."

This would appear to indicate that, at the time of writing this letter to Mr. Jacobs, Mr. Kissinger's impression was that the visit to Drawbaugh's shop was in February, 1877, and not in the fall of the year.

Now this difference in date is one that does defendants no good; does not help Mr. Draper's case in the least. Mr. Kissinger, after

writing this letter, would have been no better witness for defendants than before.

It only serves to show that Mr. Kissinger was a little doubtful as to which of two periods during 1877, when that visit *might have* occurred, it actually *did* occur; and defendants introduced this letter in the cross-examination of Mr. Kissinger simply, it would seem, for the purpose of provoking him (a result for which the shabbiness of the act was excellently well calculated), and of showing that Mr. Kissinger's mind had not always been fixed as to the *precise* date in 1877 of the visit to Drawbaugh's shop.

Mr. Kissinger was cross-examined at length as to the circumstances attending the interview which Messrs Draper, Church and Fenn had with him at Easton, Md.; and he again specifically denies having admitted on that occasion, that the pipe referred to in his letter of May 30, 1875, to Draper, was pipe intended for the ram; and again states that he said the pipe referred to was some old pipe which he thought would answer for the purpose of bringing water by gravity from the upper spring (x 196 to 213, pp. 2428–34, complts' closing testy).

Thereupon defendants' counsel, justly unwilling to leave the question of veracity to be determined upon the testimony of their witness Draper, and their agent Fenn alone, as opposed to that of Mr. Kissinger, resorted to the extraordinary measure of turning Mr. Church, one of themselves, into a witness for their clients as to this interview with Mr. Kissinger at Easton.

Mr. Church begins by giving an account of what took place, which, after making allowances for the coloring and special pleading to be expected from an advocate-witness, is a substantial confirmation of the truth of Mr. Kissinger's account (x 213, p. 2433, complts' closing testimony) of that interview. Mr. Church tells us (p. 25 , surrejoinder) that the very first remark which Mr. Kissinger made when this letter of May 30, 1875, was shown to him was to call Mr. Draper's attention *to the fact that it had been proposed to carry water down from the upper spring*. This directly confirmed Mr. Kissinger so far, and as directly contradicted Mr. Draper, who had denied (x 88, p. 193, surrej.) that Kissinger said anything of the kind. To

be sure, Mr. Church endeavors to offset this admission by indulging in trash about Mr. Kissinger's hand trembling when he read the letter, and about his making the suggestion concerning bringing water from the upper spring "faintly and with some hesitation," and so forth and so on. Mr. Church proceeds to tell us that Mr. Draper replied, "We never talked about getting water from the upper spring at that time, George, though something was said about it at the time the stone house was built." Then comes the important statement in substance that, *when Mr. Draper made this reply, Mr. Kissinger jumped up in a very excited manner, and indulged in a number of remarks the reverse of complimentary to the defendants and their agents*, which is precisely what Mr. Kissinger himself tells us (x 213, p. 2433, complts' closing testy,). Then Mr. Church describes the methods used to quiet Mr. Kissinger; how Mr. Draper told him there was no use getting excited about the matter, to sit down, and tried to quiet him, and how Mr. Fenn and Mr. Church himself both told him that "*they did not propose to call him as a witness about that ram; that they could not afford to put him on the stand for that purpose, in view of what he had testified.*" "We told him that what we had come down there for was to see whether or not the letters which we had shown him were his." No doubt they did tell him this untruth. How untrue the statement was appears on the face of Mr. Church's own account of the interview, which shows that Mr. Kissinger identified the letters without question, and that this part—*if it was a part*—of their errand having been performed, these gentlemen entangled him in a conversation about the subject of the letter of May 30, 1875, which was of course their real errand.

In the course of his statement, Mr. Church mentions that Draper asked Kissinger if he did not remember that during the visit in the spring of 1875, he, Kissinger, had shown him some saplings, and he, Draper, had asked him what they were for, and he had replied that he was going to make some pipe for the ram, and about him, Draper, then telling him that by the time he had bored those saplings out there would not be anything but sap left, and that he had better cut them up for fence rails or something else. Curiously

enough, *Mr. Church does not tell us what Mr. Kissinger's reply to that was*, though subsequent, Int. 9, he untertakes to contradict Mr. Kissinger's statement on the subject.

Finally, Mr. Church tells us that he personally questioned Mr. Kissinger as to the contents of this letter of May 30, 1875, and asked "what were the old iron pipes for, that you mentioned in this letter, were they for the ram or something else?" and he replied, "They were for the ram." After a pause, Mr. Church says he put another question:—

"George, if the old pipe mentioned in this letter were for the ram, you must have had some talk about putting in the ram before you wrote the letter; isn't that so?" And he replied, "There was talk about putting in that ram ever since I went on the place; but that ram wasn't put in until 1878; I am positive of that."

Then Mr. Church tells us that he said, "I want you to acknowledge in writing these letters of yours"; and upon Mr. Kissinger replying, "I do not think I ought to sign any papers unless both sides are present," "I told him (says Mr. C.) that I did not wish to have him sign anything that mentioned the ram, but I merely wanted him to acknowledge in writing that the letters were his."

"I drew up to the table, pulled out a pocket memorandum book that I carried, tore a page from it, and wrote out the acknowledgment, which is in evidence, marked, 'Exhibit Kissinger Acknowledgment of Letters,' and he sat down and I read it out to him; then he read it himself, and he signed it."

Now this Exhibit Kissinger Acknowledgment of Letters is in evidence in connection with Mr. Kissinger's deposition (p. 2431, closing proofs), and it is *not* simply an acknowledgment of the letters, but contains this remarkable sentence, which says nothing, but may be construed to give color to anything: "*I have read the said letters, and particularly remember the circumstances detailed in the letter of May* 30, 1875, *about the pipes and peach trees.*" The object of these worthies was not as they would have the Court believe, to simply obtain an acknowledgment of the letters, but to see what Mr. Kissinger would say as to the contents of the letter of May 30, 1875, especially; to "discount" him on that subject; and who will believe that if — as the Court is now asked to believe — these gentlemen had managed to extract from Mr. Kissinger at this interview, an intentional know-

ing, and deliberate acknowledgment that the pipes referred to in this letter related to the ram, that statement would not have figured in this paper. *What* was it he remembered?

The distinct intimation made in the record, that these people did not wish to obtain testimony from Mr. Kissinger, or, to put it in Mr. Church's own language, that "they did not propose to call him as a witness: that they could not afford to put him on the stand for that purpose, in view of what he had testified," is simply indecent. It is an admission that they went to him not for what would have been the legitimate purpose of calling his attention to this matter, and seeing whether it would bring anything to his mind, causing a change in his previous recollections, but that the errand was simply, if possible, to entangle him into saying something which might be used against him if he should subsequently take the stand again for complainants.

If Mr. Kissinger, on seeing and reading the letter, and being conversed with, had concluded that his former testimony was a mistake, he would, without hesitation, have appeared to say so. The record shows that he is an old acquaintance of Drawbaugh's, that his sympathies were with Drawbaugh, and that he was disposed to do all that he properly could to help Drawbaugh. Knowing this, the defendants' agents interviewed him time and time again during the progress of the testimony, all of which is shown by the record; and, had they obtained from him any such deliberate admission as they now say they did, they would have put him on the stand without a moment's hesitation. The record shows that no motives of delicacy would have been allowed to interfere.

But since Mr. Church has allowed himself to become a witness, and one of the parties to an issue of veracity, it becomes necessary to call attention to a feature in his own deposition which gives a very distinct taste of *his* quality.

"*Q.* 5. (P. 259, surrebtl.) When, where and by whom did you ever first hear any suggestion *relating to the bringing the water down from the upper spring on the Draper farm near Marysville?*

"*A.* The first intimation that I ever had *of the idea of bringing water from the upper spring* on the Draper farm came through a conversation which I had with Mr. David Cowens at his home near Marysville after the complainants had closed their testimony in re-

joinder at Philadelphia. I went up with Mr. W. K. Fenn to see Mr. Cowens for the purpose of questioning him more about his own pipes, which he said he had put in in 1874, and *incidentally he mentioned the fact that there had been talk about getting water from that upper spring.*"

This was a distinct and unmistakable admission, made in reply to a distinct and unmistakable question, and showed that before Mr. Draper had been recalled in the surrejoinder, Mr. Church had acquired from Mr. Cowens knowledge of the proposition to carry water as near as possible to the house, by gravity, from the upper spring. This of course entirely debars defendants from asserting that the proof as to this project is an afterthought, brought about by Mr. Draper's deposition in surrejoinder, because Mr. Church's statement shows that the matter was voluntarily mentioned to him by Mr. Cowens, previous to the taking of Draper's deposition. Was it a reflection of this kind which led to the following remarkable change in Mr. Church's deposition on the subject? After his examination had been continued for some little time, there was a noon adjournment, and *after* that noon adjournment occurred the following: —

"*Q.* 15. (P. 263, surbtl.) In your said fifth answer you state that Mr. Cowens incidentally mentioned the fact that there had been talk about getting water from that upper spring; so far as you have any present recollection of what Mr. Cowens said at that time upon the subject, will you please state it?

"*A.* After I had questioned Mr. Cowens about his own pipes, and he had shown them to me, he told me that he had been down to Easton, and had been talking with Mr. Kissinger about the ram and the pipes on the Draper farm. I remember that he told me that Kissinger had said to him that he bored logs twice; that the first he bored he put down and plugged up. It was during our conversation about his visit to Kissinger and what Kissinger had said that there was mention made of this upper spring. My recollection is, that it was not what he (Cowens knew about the upper spring, but what had been talked by others. *I am sure that he said nothing about bringing water from that upper spring to the house; for that I should most certainly have distinctly remembered*, as I was at that time very much interested to know what means had been devised or talked of for getting water to that house or near it."

And this young gentleman, who was capable of making the fifth answer before dinner, and the fifteenth answer on the same subject

after dinner, is one of defendants' counsel, and their chosen instrument to assail the veracity and memory of George W. Kissinger!

It does not matter much whether the remarkable change in Mr. Church's statement is attributable to a want of understanding of the force and meaning of language, or to "moral facility"; in either case, *he* is "out of court" as a witness for his clients, in this issue of veracity and recollection.

Defendants' counsel, in their examination of Draper, undertook to anticipate the testimony which *they knew* Mr. Kissinger would give, when called, about the meaning of the Kissinger-Draper letter of May 30, 1875. They *knew* that Mr. Kissinger would say that there was a project in the spring of 1875 to convey water by gravity from the "upper" spring, and that the allusion in the letter to "pipe" was to pipe for that project. This they had ascertained from Mr. Kissinger himself, as sufficiently appears from Mr. Church's deposition.

They therefore had Mr. Draper testify that there was at one time a project to take water from this "upper" spring; not, however, for household use, but for the "barnyard," and that this project was under discussion in or about 1867 (p. 203, surrejoinder).

Mr. Draper was then asked (qq. 150, p. 203, surrejoinder): —

"Did you ever at any time contemplate or talk about running the water from the upper spring to the house?

"*A.* I *think* not."

In this suggestively hesitating and perfunctory denial, Mr. Draper is contradicted not only by Mr. Kissinger, but by Messrs. Cowens and Schwartz.

David Cowens (p. 2458, complts' closing proof) remembers being down at Kissinger's while Mr. Draper was there. Kissinger and Draper told witness that he thought he could convey the water from the upper spring *by pipes that would run half way up the other hill towards the house.* Witness said that he thought that spring would be dry in dry weather. He, Draper, thought not, by digging it

deeper. Witness has no date for this, but thinks it was in the year 1875 (q. 3, 4).

It is important to note, in connection with this testimony of Mr. Cowens, the admission which escaped from defendants' counsel, Mr. Church, when officiating as a witness for his clients, that Mr. Cowens, *before* the taking of defendants' surrebuttal, *before* therefore this matter of the project to get water from the upper spring had been agitated in this controversy, had, in the course of casual conversation, mentioned the subject to him (Church).

In the face of that, defendants cannot say that the depositions of Messrs. Kissinger, Cowens and Schwartz on that subject were an afterthought, brought about by Draper's "surrejoinder" story.

LEONARD SCHWARTZ (p. 2389, complts' closing proofs). — Mr. Schwartz testifies: —

"*Q.* 1. It has appeared in evidence that at one time Mr. George W. Kissinger had a hydraulic ram on his farm at Marysville; while he lived on that farm did you ever hear anything from him, or have any talk with him, about any other way of getting water up to his house through pipes, and if so, what talk did you have with him about it, and what did you do about it?

"*A.* *About a year after* he moved back the second time (1874), I was down there, and he mentioned to me *that Mr. Draper had proposed to lay pipe from a spring some distance above the main spring that they used water from, and run it up the other side towards the house just as far as he could.* That was the conversation that passed between us at that time.

"*Q.* 2. Did you go and look at that upper spring at that time or not?

"*A.* I had been to see it; I don't know whether I went just at that time or not; I had been there and was looking at it. We were standing just below the spring, looking across to the other side, and we thought it would be conveyed about half way up the hill towards the house. He, Kissinger, said something about digging out the spring, and thought it would furnish the water."

"*X Q.* 19. From Mr. Kissinger's conversation, *I gathered that Mr. Draper had spoken of running water from this upper spring just shortly before I was down there;* I believe Mr. Draper was down just shortly before I came down, and then they had this conversation."

(Mr. Draper himself testifies that he *did* visit the farm in the spring of 1875.)

"*X Q.* 38. He said he intended to have the pipe deliver the water right below the house as far up as he could possibly get it to reach or to run."

A survey of the Draper farm by a competent engineer shows the locality of the upper spring referred to in this testimony, and shows also the point where that spring would discharge water by gravity, being one hundred and forty-five feet from the northwest corner of the dwelling, a point very much nearer to the house than the main spring. (See deposition of Theodore C. Ives, p. 2448, and complainants' Exhibit Ives Survey, Draper Farm, p. 2450, compl'ts' closing proofs.)

The fact, then, of the proposition to convey water by gravity from the upper spring to the house, is established in the face of Mr. Draper's hesitating denial, and that fact is in itself confirmatory of Mr. Kissinger's statement that his letter of May 30, 1875, and the mention of pipe in that letter had reference to this proposition.

Add to this that Mr. Draper's story, concocted to give color to the insinuation that the reference in this letter was to pipe for the ram contradicts itself. The reference to pipes in the letter is distinctly to pipe "to go up hill."

Mr. Draper's allegation is in substance that this came about because having suggested the use of terra-cotta pipe to convey the water *down hill* from the spring to the ram, in place of wooden pipe, and for that purpose only, and having learned that it would answer that purpose, he concluded not to adopt it, because it wouldn't serve to convey water up hill, for which purpose he hadn't proposed to use it.

The story is absurd — a falsehood on its face.

If, however, it be assumed that Mr. Draper proposed to use terra-cotta pipe for the purpose of carrying water by gravity from the upper spring to a point as far as possible *up the hill* towards the rear of the house, and that it was with reference to *that* project that his inquiries as to terra-cotta pipe were made, *then* his story becomes rational, intelligible, and really fits in with Mr. Kissinger's letter.

Furthermore, the story as he gives it does not tend to prove what it is designed to prove, to wit, that a ram had been ordered from Drawbaugh before May, 1875, but tends to prove the exact contrary,

for it is simply preposterous to suppose that *after* that event, and a conference with Drawbaugh, and a contract made with him (in pursuance of which contract he actually supplied iron pipe to convey the water from the ram to the house), there should have been broached or discussed such an absurdity as the use of terra-cotta pipe for that purpose.

As to the story that Mr. Kissinger, at the Easton interview, admitted that the reference to pipe in his letter of Aug. 20, 1875, referred to pipe for the ram, he denies it; and his denial is supported conclusively by the character of the written statement procured from him. That statement completely excludes the idea that he, during this interview, made, deliberately and knowingly, any such admission.

It is of little moment to inquire whether or not he may, in the state of excitement and anger under which it is sufficiently apparent he labored at the time, or from mental confusion arising from a perplexing cross-examination by these gentlemen, have let slip some expression construable as such an admission. It is enough that the gentry who were endeavoring to entangle him in their toils did not venture to embody any such admission in the "written statement," or to call him as a witness.

Moreover, Mr. Draper's testimony as to this alleged admission is very weak indeed; he simply says, "*I so understood him*, in answer to a question put to him, *I think*, by Mr. Church."

The statement of Mr. Fenn, the willing instrument of defendants, to do their dirty work, is more positive, as might be expected.

As to Mr. Church, his deposition contradicts itself. He first gives a general account of the interview, which demonstrates so fully the substantial truth of Mr. Kissinger's previous account of it as to deprive his subsequent specific contradictions of specific parts of Kissinger's deposition of all force. He tells a story which is a disgrace to himself and to his companions, and which shows that the whole affair was an abominable scheme to entrap Mr. Kissinger; and yet he finds it in his conscience to say that the *only* object was to see whether Mr. Kissinger would own the letters as his. And, finally, he commits suicide, by deliberately contradicting in the afternoon what he had said in the morning, the "correction" being palpably in

the interest of the case, which, in the double capacity of counsel and witness, he was endeavoring to make out for his clients.

The net result of the "hydraulic-ram" issue has been to show that Draper's original deposition for defendants is untrue; that his visit to Drawbaugh's shop was not, as he says, in 1874, but in 1877; and, in showing this, it also shows that defendants' attorneys and agents were capable of endeavoring to establish a false story by a mass of equally false testimony, deliberately manufactured in the face of evidence completely demonstrating the "falsity"; that with their eyes open to the truth, they went to work to concoct, and endeavor to impose upon the Court, an elaborate series of untruths, knowing them to be so.

And the very strongest proof of all this is that Daniel Drawbaugh, the claimant in this case, the man who made the ram, put it in, and supplied, or caused to be supplied, the pipe for it, and into whose hands his own bill for the work has been traced, has not been called upon to testify on the subject.

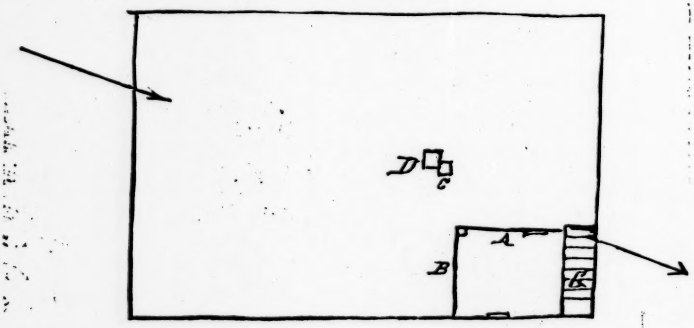
DRAWBAUGH'S SHOP AND "PARTITIONS."

The shop in which Drawbaugh's various alleged talking machines are said to have been made and used, and to have been seen by his witnesses, has been occupied since the summer of 1867 by Drawbaugh, and by various companies and individuals with whom he has at different times been connected in business. Drawbaugh (defts, ii, 919) gives the dimensions of the shop as about forty feet in length, thirty or thirty-five in width, and as consisting of two stories; below them a basement with a dirt floor; at one end the water wheel; and above a garret or loft. It is the arrangement of the *second* story, which is of particular interest in connection with this controversy, because it was in that story that Drawbaugh had the small private or office room which figures so largely in the testimony, and in which the various alleged talking machines are stated to have been for the most part kept. The testimony shows that the arrangement of this second story was several times changed after the occupancy of the building by the company which originally fitted it

for him in 1867, to wit, the company known sometimes as the Pump Company, sometimes as the Faucet Company, and sometimes as the Drawbaugh Manufacturing Company.

It becomes of some moment to ascertain what the different arrangements of this story were, and, as nearly as may be, the dates at which the several changes in that arrangement were respectively made. Drawbaugh, upon cross-examination (defts, ii, pp. 920–22), states in general terms the different arrangements which existed at different times, but he was not definite, and did not pretend to be definite as to the periods of the different arrangements. For these we have to have recourse, also, and chiefly, to the occupants at the several times. According to Drawbaugh's deposition (p. 920), the arrangement at the time of the Faucet or Pump or Drawbaugh Manufacturing Company, as the concern was variously called, is shown in the following diagram: —

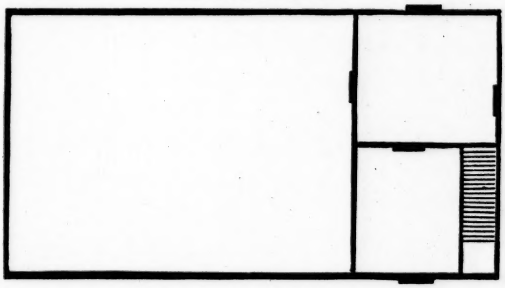
Shop Diagram No. 1.



The small room at the northeast corner was the room used by him as a private room; the stairs from the main story, on which the principal heavy iron working machinery was, came up to this second story at G and entered into the large space. At D was the chimney. In the southeast corner there was at one time a dark closet, made with no window in it, to store the faucets in after they were finished. It was so small a contrivance that Drawbaugh did not remember it at all. It was spoken of by another witness. These partitions were not changed during the time of the Axle Company.

The next concern was Hauck Bros. & Co., in the summer of 1873. The following diagram shows the arrangement of the rooms at that time: —

NICHOLS SKETCH.



It will be observed that the northeast corner room and the stairway inside are the same as before. Another room was made in the northwest corner of the building. This sketch was drawn by the complainants' witness Nichols (complts, vol. ii, 882) in response to redirect question 258, as a way of representing clearly the arrangement which had been referred to in the witness's cross-examination. Nichols worked for the Haucks in April and May, 1874. The exact date when this additional room in the northwest corner was put in is not certain, but it was not characteristic of the period of the Faucet Company, for Drawbaugh does not show it in his sketch for the Faucet Company period. It was there at the time the Haucks began, and therefore would appear to have been introduced during the latter part of the time of the Faucet Company. It had benches and a stove in it. The doors and windows are indicated in the sketch.

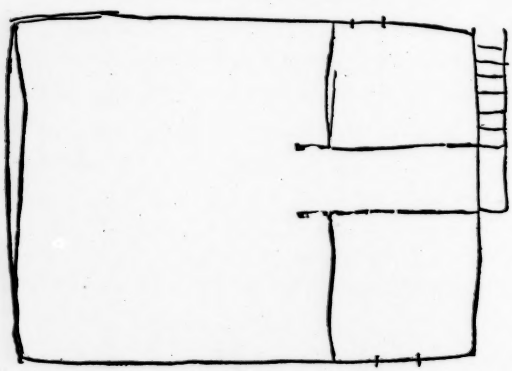
David Hauck, the principal man of the firm of Hauck Bros. & Co., testifies (complts, i, 792) that the arrangement was as is shown in this sketch. Testimony to the same effect is given by Samuel F. Hauck, another of the parties (complts, ii, 1166). They particularly state that the two small rooms were not separated by any gangway or entry way, as in the next arrangement, and that the access to the upper story was by a stairway within the building.

Drawbaugh says (defts, ii, 922) that at the time "the Axle Company took charge of the shop there was a stairs placed on the outside of the building, brought up from the ground to the second

floor at the north end of the building, and a doorway cut through the outer wall into the second floor, entering a gangway between the two rooms." It was the construction of this outside stairway and the cutting of a doorway through the outer wall, then done, which gave occasion for this gangway.

This arrangement is represented by the following diagram: —

AXLE COMPANY DIAGRAM.



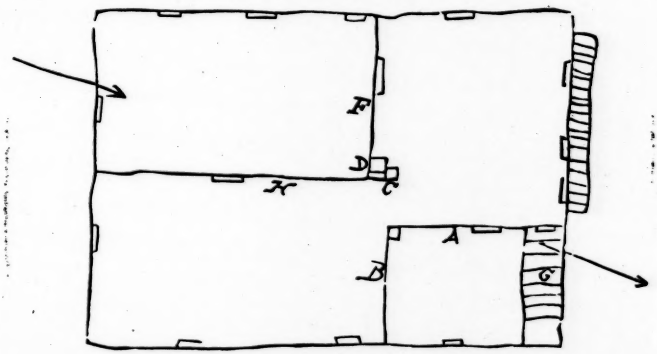
and was made in the spring of 1875, by the Axle Company, so called, which occupied the principal story of the building, only the lower story, being still occupied by the faucet machinery owned by Hauck Bros. & Co. For the purpose of obtaining access to their premises, the Axle Company constructed a stairway outside going up to the second story and opened a gangway between the two small rooms leading directly into their large machine shop.

This is expressly testified to by David A. Hauck (complts, i, 792, ans. 40). That the stairway outside was not put in before the Axle Company began is also shown by the defendants' witness, Augustus Kahney (defts, iii, surrbtl, 262). He states that he worked for the Axle Company nine or ten days before the outside steps were put up. John Kahney, complainants' witness (rejoinder, iii, 2039), helped to hoist in the machinery for the Axle Company before the outside steps were put up.

The next change was when the Clock Company formed in April, 1878, and began to manufacture clocks. Drawbaugh gives the fol-

lowing diagram of the condition of things at that time as follows (defts, ii, 922–3) : —

SHOP DIAGRAM NO. 3.



The proofs show that the near corners of the two rooms partitioned off were nearer together than indicated by the diagram, leaving little more than a mere passageway between them, and thus virtually dividing the floor into four rooms. Complainants' witness, John Kahney, says (complts' rejoinder iii, 2039, q. 46), "while the Clock Company was working there the floor was divided into four rooms. There was no change in this arrangement until Chellis took charge of the shop in 1879, and shortly before this suit."

The different arrangements, therefore, were: During the time of the Faucet Company, Drawbaugh's private room alone in the northeast corner, as shown in shop diagram No. 1; later, and towards the close of the Faucet Company period, but before the Haucks began, two rooms with a single partition between them, as in the Nichols sketch. This was before, but not long before, July, 1873. Next, in the spring of 1875, the arrangement shown in Axle Company diagram, — a space outside, — Drawbaugh's private room in the northeast corner, his workroom in the northwest corner, and a gangway between them. Next the arrangement of the Clock Company, shown in the shop diagram No. 3, virtually dividing the floor into four rooms, retaining the outside staircase, the door from which no longer entered into a gangway but into one of the four rooms. This change was made in the spring of 1878, and lasted until shortly before the suit began.